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January.

Nature! great parent! whose unceasing hand
Rolls round the seasons of the changeful year,
How mighty, how majestic are thy works!
With what a pleasing dread they swell the soul,
That sees astonished! and astonished sing!
Ye too, ye winds! that now begin to blow
With boisterous sweep, I raise my voice to you,
Where are your stores, ye powerful beings! say
Where your aerial magazine reserved
To swell the brooding terrors of the storm?
In what far distant regions of the sky,
Hush'd in deep silence sleep ye when 'tis calm?

THOMPSON.

With what astonishing rapidity the seasons come and go, days flit by, and weeks roll into months and the months fill up the years that mark the check roll of time. Twenty-four years have come and gone, twenty-four years of the building up of the west, since we first saw the prairies in all their wild magnificence spread out before us; their visions had haunted us for years, our fancy had pictured their long stretches and wide spreading slopes, and we were thus prepared to appreciate their richness of soil and from their ample sweep were determined to carve out a home. To our youthful fancy this was but a small task, but the years that have come and gone like fleeting meteors, have long since dispelled those youthful fictions, and whispered to us a graver secret, in which we were informed that this beautiful land was like no other land, that its value would only be yielded up to new modes of culture and that the genius of man must be evoked for new implements and new processes. To a great extent these have been accomplished and the prairies teem with life and activity, everywhere they are dotted with farms, and cities and villages mark the highways of commerce. The iron rail has encompassed them as in a net, the

din of forges, the hum of wheels and the thunders of the train make up the music of the day; yet there is much to be accomplished, much to be learned, much to be done, before we shall have made our prairie homes what they should be. We have set up an idol of broad acres at which we have all worshiped, we were to grow rich by the accumulation of parchment upon which the hieroglyphics of sections, of quarter sections and of eights were to possess wonderful cabalistic power. They were to build for their possessors fine mansions filled with all the luxuries that heart could wish; but to the farmer these parchments have brought serious trouble, when held for more than a reasonable homestead, or more than could be cultivated, taxes and interest have eat out their values, and now we have come to learn that too much land is no blessing but a drag that puts a blight on the surroundings of home and mars the beauty of the homestead by subtracting both the useful and the beautiful.

The castle of Indolence has been swept away and a brighter future dawns upon us. The experience of the past has brought to us wisdom, and we can now enter upon the new year with renewed energy. To those who have still too much land we say sell it to new comers who will make new homes, assist in the public school, add to our society, so as to fill up our neighborhoods and thus place us in a condition of emulation in all good works. The past year has been a most prosperous one for the prairie farmer and it is our duty so far as in us lies to make the next equally successful. It is fast becoming an established fact that there is no

part of this great republic so fertile in the products of the great farm staples as our own state when properly cultivated, at the same time our farmers have the reputation of being bad managers and a shiftless set in general. To these charges we must to some extent plead guilty, but we think the time is not far distant when we shall stand first and foremost in the field of progress. We think we can show that our farmers as a general thing are enterprising and that now their eyes are open to the damaging effect of too much land their course will be upward and onward.

[From the *Cincinnatus*.]

The Site for an Orchard. By Dr. J. A. Warder.

The selection of a suitable site for an orchard is a matter of no small moment to him who would be a successful grower of fine fruits. Without, at this time, pausing to inquire into the character of the soil, let us examine more particularly the aspect of the field to be appropriated to this important crop; for the orchard is a permanent investment, and so much depends upon the site, that we should make some sacrifice of our convenience, rather than commit any error in this particular. In the first place, then, let it be understood that the orchard should be well exposed to the sun and air. The least desirable positions for orchard planting are narrow valleys, particularly limestone valleys in a mountainous country, traversed by a small brook, or where the surface is spouty from springs or subjacent water. Even if such depressions are considerably elevated, but surrounded by higher and abrupt elevations, they will be found obnoxious to late and early frosts in spring and fall, especially the former, which are often disastrous in such situations, after the fruit-buds have expanded in the sheltered nooks. Every one at all conversant with meteorological observations made in a broken country, is aware of the different range of temperature that will be indicated by instruments suspended at different elevations. When the cooling influence of radiation has lowered the temperature of the surface of the earth and of objects near it, the stratum of air in immediate contact will be chilled, and growing heavier, will flow down into the most depressed situations, and, accumulating there, will cause a difference of several degrees of temperature. This, when near the freezing point, will be of the greatest consequence to tender vegetation, which may be preserved in perfect safety at forty degrees, but will be destroyed at thirty degrees, or even at a higher point, in some cases.

The frost line becomes a very important subject of inquiry in the selection of an orchard site, and in some countries we find that its position may be definitely settled within a limited range of elevation; not that a certain level can be indica-

ted, above which there will always be an immunity from frost, while all below will suffer, but we may approximate, in certain situations, so nearly as to indicate that certain sites are safe or unsafe.

Nor is it the absolute elevation alone that is to be taken into the account; in any given locality, we may assume that the higher the orchard is situated above the water level, the safer it will be, and that the lowest depressions are the most unsafe or frosty. It is not always the mere elevation, but rather the relative elevation of the site, that renders it more desirable than another in the same region. There are many orchards that are situated upon a moderate bluff, with a rapid descent of only a few feet or yards, into a swale or valley of moderate extent; these we find to be uninjured, when another at a greater elevation, but in a depressed basin surrounded by higher lands, will be found to have suffered from the influence of frost. In the one case, the cold air could flow off rapidly into the adjoining depression, while in the other, the cold air from adjoining slopes would collect, and accumulate in the situations described.

In the great plateaus of the world, we often find immense tracts of land so nearly of the same level as scarcely to afford sufficient drainage for the surplus water; of course, we should expect to find, in such places, little variation of temperature arising from difference in elevation. But even in such situations, whether we examine the table-lands of our timbered regions, or the extended areas of the prairie country, we shall find that the drift formation which covers these vast tracts, has not been distributed evenly, but that there successive rolls or swells frequently recurring, which give, in some instances, considerable variations of level. A bold ridge, of fifty feet or more in height, rises abruptly from the level prairie, stretching along for miles, and affording admirable exposures for orchard sites. Such places are observed to be free from late and early frosts. In other places, there is an abrupt depression of the surface answering the same purpose—drawing off the cold air. These may be very moderate in their extent, as the prairie sloughs, or they may be small vales, the courses of the minor streams, or of larger extent, the valleys of rivers, or the depressions of lakes. In these latter cases, the modifying influences of considerable bodies of water enter into the frost problem as an element of no mean value, and acting as favorable agents, warding off frosts.

REMARKS.—We cannot better illustrate our views as in accordance with the Dr's., than to extract from one of our letters to the *Chicago Tribune* of December, 1858. In company with other gentleman, we were on a visit to the south part of our State:

SOUTH PASS,

"A new station six miles north of Jonesboro, at the head waters of the Drury and Cache rivers, and on the south side of the "Grand Chain" of hills, whose rugged tops and sunny slopes invites to the cultivation of the peach, the grape,

and other orchard products, is fast becoming the centre of our new commercial orchards. Here our northern friends became eloquent over the healthy and vigorous growth of the peach, the thrifty, smooth trunks of the apple, and the hardy appearance of the vine; in fact, they were fully converted to the faith that Egypt was the seat of Pomona, and it was here that she should be crowned, and here hold her court. The next question of moment was a location for the peach and the grape, not only where they would grow, but where they would grow and flourish best. This latter proposition is one no so easily settled, some advocating the highest points, while others claim that just above the line of spring frosts is the most desirable. As we have paid some attention to the study of the soil and climate of this section during the past three years, we propose, while our friends are turning their inquiries to the price of this or that tract, this or that aspect for fruit culture, to give our views as to the value of those various elevations. It is well known that frost first occurs in the valleys, and generally rises to what is termed the fog line. That is, the vapor which the sun has raised during the day, settles, or rather rolls down the hill sides at night, and as the radiation is rapid in the valley, the heat which is given off by the condensation of this vapor, and the radiation of the soil protects the hill sides from frost, by inclosing them within the warm atmosphere that rises from below, while the valley gives off its own heat, and at the same time is loaded with the cold vapor from above, which had parted with its latent heat; hence frost is the result. In case of spring frosts, it will be found on a level, distinctly marked on the hill side at the highest point of this cold vapor bath, first commencing at the bottom, the vapor is congealed as it fills up the valley, and hence it becomes necessary to have a deep valley in which to put the cold air below the line of the peach orchard, to protect it from frosts.

Let us take, for example, this station, which is in the valley at the head of the Drury, and which, by the way, is twenty-five feet above the level of Lake Michigan. The silurian lime stone crops out and forms the bed of the road, while next above it is the shale, and above this the sand stone. The valley is yet a forest, which, while it gives off heat rapidly, prevents the cold strata of air from above to reach below the tops of the trees, and, as a matter of course, the frost is much higher up the hills than it would be were the valleys cleared of wood, and as a matter of course, permit the vapor to reach the ground. To prove this point, we have but to refer to the orchards near the tops of the hills; the fruit trees near the line of the forest lose their fruit from frost in consequence of the forest trees not permitting the vapor to roll down the hill, and by congealing, destroys the fruit buds. The present practice is to seek out the highest points, clear off the wood to the frost line, or nearly even with the tops of the valley woodland, and upon this bare point, unprotected from the bleak winds and sudden changes, plant out the peach orchards. If the country was to remain in its present condition this practice might answer a very good purpose, but the valleys will be

wanted for corn, for pasturage, for and meadows; hence they will soon come under the sharp practice of the woodman's axe. Then we apprehend that the frost line will reach further down the slope, and, in many cases, come below the out crop of the lime rock, especially south of this point, in consequence of the dip of this rock, which forms by far the richest and best peach soil. As we go from the station, up the west side of Mount Tabor, we are at the top of the shale, at an elevation of some fifty feet above the valley. The peach trees here are very thrifty, but as the wood land below dams up, as it were, the vapor, the fruit is killed; but so soon as the trees below are cut away, we shall expect these trees to hold their fruit. Should this view prove correct, it will extend the area for peach culture an average distance of fifty feet elevation, and when we take into consideration that those hills only average about two hundred feet in height, one can have some idea of the addition. The lowest point in Col. Bainbridge's peach orchard is about one hundred and seventy-five feet, and where the hill rises fifty feet above this, and where the forest comes up to the orchard, there the fruit is killed by the frost the same as if it were near the bottom of the valley. The forest forming an artificial valley as dangerous on a small scale as the natural valley itself. Mount Tabor is about two hundred and twenty five feet above the valley, now suppose the sides of the hill and valley about it were clear of their timber. It will no longer be kept warm to the summit by the heated air arising from the now wooded valley, and after its own heat is radiated or carried off by the winds that have free access to it; the peach line will be removed far down its sides, while its apex will be subject to frost. A warm spell in March will expand the peach buds, while a sudden norther, unchecked by a friendly belt of timber, may prove disastrous. Mount Look-out has a still higher summit, as is the case with many other points, and at this time their high points are the most valuable for the peach, and with proper care they may continue valuable; but we suggest that the course that is now being pursued will in a few years diminish their value, especially when the shale and limestone formations become adapted to the peach by clearing away the forest from the valleys, as they form the most natural soil for this fruit. It is, therefore, time to consider how much of the native forest shall be left on the hill sides, to ward off the sudden changes that the clearing up of the country will bring in its train. So much for the peace. We will now consider the

GRAPE.

By the elevation and broken nature of this narrow point of land lying between these two large rivers, it is easily seen that it is a natural watershed, upon which the vapors and clouds from the bottoms will discharge their moist favors, producing during a portion of the year a damp climate. And as it is at the same time exposed to a burning sun, the growth of the vine must be rapid, while the humidity will tend to develop the rot in all such varieties as the Catawba and the Isabella. It is, therefore, a problem yet to be solved, how far grape culture will succeed at

this point From the nature of the soil, and with open, clean culture, we have strong hopes of success with such varieties as Norton's Virginia and Delaware, but we would not think of planting the Isabella."

It may be asked: How do these masses of water affect the frost? Science answers: By their evaporated moisture influencing the atmosphere. This may save us from the blighting influence of frost, by enveloping the frozen vegetation in a wet blanket of fog; enabling it to be thawed in the dark, as it were, by which we avoid the influence of a bright sunshine, that would have destroyed the tissues had they been suddenly exposed to it when frozen. An equally important result is derived from the direct influence of the humidity of the atmosphere, which modifies the temperature remarkably. The immediate vicinity of large bodies of water, insular situations especially, even when low, are known to have a more genial climate in consequence of this condition of the atmosphere, which depends upon the large amount of caloric that is present in the latent form, in the vapor, and which becomes sensible heat as fast as the moisture is condensed.

We thus see that very opposite situations, in regard to mere elevation, may both be recommended to orchardists; but the latter are rather the exceptions than the rule, for we can not always count upon the saving influence of a fog, nor are the modifying effects of a moderate sheet of water always to be depended upon at the time when most needed. Still, we may find a few favored spots, where an insular position, in a lacustrine situation, receives a double effect—acting at both extremities of the season of vegetation, in quite an opposite way, but in both acting favorably. In such places we shall discover that the spring opens late, being retarded by the cold atmosphere flowing over the chilled waters, that may be even icy, when inland places in the same latitude are rejoicing in a mild and genial temperature, tempting the expansion of the flower-buds. Vegetation on an island thus situated is retarded until all danger of frost has passed, and the air has received the full benefit of latent heat by its hygrometricity. Then, again, in the autumn, when we are in danger from the access of an early frost, such as sometimes, north of latitude forty degrees, destroys the whole crop of corn, almost universally, over hundreds of miles, these favored spots have really a warmer atmosphere, from the influence of a great extent of water, that has enjoyed a summer's sunshine, and which warms the air by giving off its heat very steadily, but slowly; and besides, as the surface of the land cools by radiation and condenses the watery vapor, it receives accessions of temperature that had been locked up, or was insensible in the vapor. Hence we find that in these places, though the opening of spring was retarded a month, the approach of winter and autumnal frosts is warded off for two months, making the season really one month longer than in the same latitude inland.

It must be confessed, however, that the subject of meteorology is not fully understood. We have but a glimmering of the light that we hope is to be shed upon the subject when the deductions from millions of observations long continued and systematically conducted, shall have been wrought

out for the benefit of the orchardist and the general agriculturist.

We also have storms accompanied by a low temperature, passing across the country, in which, at times, the greatest intensity of cold is at the southern border. Such a one passed from the west to the east in January, 1852, in which the mercury, near Marietta, O., sank to thirty degrees below zero; at Zanesville, O., on the same river, it was—twenty-seven degrees; at Lancaster, O.,—thirty-two degrees; while at Cleveland, O., it was only fifteen degrees below, and at Aurora, on Cayuga Lake, influenced by the unfrozen water, its greatest depression was only four degrees below zero.

ASPECT.—When considering the orchard site, the best *aspect* of the ground becomes a matter of interesting inquiry. To all vegetation, the morning sun is a welcome visitant after the night's repose; for plants, as well as animals, rest from their functions at night, and all nature rejoices in the return of day; hence an eastern or a southeastern exposure is generally preferred, but we find that practically there is little difference in the different parts of an orchard that can be fairly referred to this cause. Some planters prefer a southern slope, thinking that the fullest exposure to the sun is essential; others select a northern aspect, in the hope that they may there avoid a too early excitation of vegetable life, and also that the heats of summer may be thus moderated. In my own opinion, the aspect is a matter of little consequence to the success of an orchard, though my predilections are in favor of an easterly exposure. The danger of a southern aspect in summer, and the advantages of the northern slope, may, in a great degree, be obtained or obviated by judicious planting and pruning, as will be set forth in another place.

A theory has been started by those who are opposed to a northerly slope, that vegetation continues later in the season in such situations, especially with young trees, and that hence they are not in so good a condition to resist the access of very severe weather at the sudden setting in of winter. The hypothesis is not sustained by long-continued observation, although many facts noted in the autumn and winter of 1859 induced persons to embrace the theory; these were particularly the killing of the peach-buds, upon northern slopes, by the December freeze. There is no evidence that there was any want of perfect ripening of the wood in these situations; on the contrary, it is well known that, long before December, the growth of these very trees had been checked, the wood had been ripened, and the foliage had been cast to the ground.

The warmer exposure of a southern slope may and often does favor the premature swelling of the buds and starting of the sap during mild and pleasant, bright weather in the winter, and vegetation is often seriously injured from this cause.

In many parts of the country, it is much more important to consider the exposure to the prevailing winds of the region, and to select the site and aspect that shall enjoy the benefit of protection. This, I am aware, is a proposition that has had opponents as well as advocates in the broad savannahs of the West, where, especially, it becomes a question of the greatest importance.

There are benefits as well as evils attendant upon the motions of the atmosphere. The swaying of the limbs, when agitated by the breeze, gives them tone and strength, and may assist in the circulation of the sap within their cells; and the constant agitation of the atmosphere, commingling the warmer with the colder portions, will often modify the temperature to such an extent as to give an immunity from the frost in the open prairie, at the same moment that the more tranquil air, within a limited clearing of forest lands, has been cooled down by radiation to the frost point. On every account, therefore, the moderate and reasonable exposure to the influences of a mobile atmosphere is rather to be courted than shunned.

The subject of protection is here plainly stated, and it is the same ground taken in our address before the State Horticultural Society at Bloomington. We would prefer deciduous to evergreen trees for the orchard, but for the garden the evergreen would be, no doubt, the best.

ASPECT.—We are most decidedly in favor of an eastern aspect, if we are to plant on the open prairie without timber protection, but with a belt to break the force of the westerly wind, we would not be particular about the aspect. A southern aspect with an eastern and northern protection, we should consider the worst of all, and next to that a northern aspect open to the sweep of the northwest wind. But protection is of little value on stiff clays without adequate underdraining. The condition of the soil at this time is that of one well underdrained, but so soon as we have a few heavy rains, we shall be able to appreciate the value of underdraining.—ED.

The views that have been advanced by the advocates of protection for orchards on the prairies, have been somewhat modified since they were first promulgated. We are now told, by those who have opposed "protection," that narrow timber-belts of evergreens and deciduous trees, should be planted on the windward sides of orchards, to moderate, not to cut off, the aerial currents; in this all will agree, and those who have any sympathy for a tree will surely prefer to have the blasts that sweep over miles of open country somewhat checked and tempered before reaching either themselves or their orchards. The testimony as to the effects of cold in sheltered and in exposed situations, it must be confessed, appears somewhat contradictory; but this is because we have not all the elements of a complex problem.

WINTER-KILLING.—A most serious evil, both to the nurseryman and orchardist, is the severe

injury sometimes done to the trees by frost. This is commonly known by the term of "winter-killing," which has, at times, destroyed millions of trees, and thus blighted the hopes of long-continued labor and large investments of capital. Some orchardists have been disheartened, and have given up in despair. The investigation of the causes of this disaster, and the conditions under which it occurs, will be of great value to future planters; and though, perhaps, we have not yet at command sufficient data for the full explanation of the phenomenon, it may be well to look into the attendant circumstances that have been observed; and as some of the most important considerations depend upon the soil and exposure, they may be well introduced in this essay. I have already alluded to the theory of northern hill-sides maintaining a later growth than other situations, and have stated that the facts do not sustain the position. The warm exposures on southern slopes and sheltered nooks, are apt to favor the premature starting of the sap in the mild weather that often occurs during the winter, in our changeable climate. On the prairies, and on flat lands elsewhere, an excess of humidity in the soil will contribute to this effect; and in such situations we may often observe the most terrible destruction following a great and sudden change of temperature. Exposure to long-continued cold, with severe winds, seems to dry up the juices of the plants, in some instances, and thus effect their destruction. This, in the far North, is believed to be a frequent cause of the evil. The condition of the tree upon the access of severe cold is too important a subject to be lost sight of, and has already been alluded to.

Of any given variety, the more perfectly dormant the plant, and the more complete its condition of hybernation, the greater will be its immunity from this evil. The atmospheric changes and conditions we can not control, and we can modify them only in a very limited degree, by hedges, by timber-belts, and by evergreen screens, the value of which begin to be appreciated. The state of the soil as to its moisture, is under our control, and by thorough and surface-drainage, we may obviate one very important condition that conduces largely to the injury under consideration—the excess of moisture.

The more perfect ripening of the wood is also a matter of great moment, and this is subject to our control, particularly in young trees in the nursery and orchard.

Some varieties are much more subject to injury from cold than others. Among these are some of the most thrifty and free growing sorts. There appears to be an inherent quality of hardiness in others, that enables them to resist the most trying alternations of temperature. Why some should be thus hardy, and others tender, we do not know, but it is not their Northern or Southern origin; some with the former are most tender. Sad experience has taught us the fact, and since the dreadful winters of the past decade, in some parts of the West, the first question asked respecting a new variety of fruit is that regarding its hardiness. Pomological societies have endeavored to collate the names of the hardy and tender kinds, and have thus, by their united experience, been enabled to present lists, of a few

of the best known apples, for the use of planters.

It will be proper, in this place, to say something about the soils best adapted to orcharding. The apple is a gross feeder, but a good-natured one, and, like a good citizen and a cosmopolite, it submits to surrounding circumstances. In our own country it flourishes alike on the granite hills of New England, or the mountain ranges stretching thence to the southwest, in the limestone valleys amid these ridges, on the sandstones and shales that form the southeastern rim of the great valley of the West, upon the vast drift formations that overlie the rocks from the tide-waters of the St. Lawrence to the sources of the Missouri, upon the rich diluvial and alluvial deposits of our river bottoms, and our vast prairies. I have said that the apple flourishes *alike* upon these various soils and under these so different circumstances; perhaps this expression should be somewhat modified; there are varieties that appear peculiarly adapted by their nature for all of these different situations; there are, perhaps, none that will thrive equally well in all.

The orchardists of each section of the country must ascertain for themselves what varieties are best adapted to the peculiarities of the soil and climate; hence, no one region can furnish lists of varieties to be taken as a guide for the planting of others differently situated. Hence, too, the importance of local organizations for pomological study, and the great value of the labors of those who are engaged in the prosecution of these investigations in the American Pomological Society, which will, it is fondly hoped, ultimately give us corrected lists of fruits that are adapted to all the varying circumstances of soil and climate, in each of the geological regions of our country. This has already been proposed by the excellent general chairman of Fruit committees, as an important work for the National Society; and so soon as the subject receives a fair consideration, its merits will be appreciated, and the union of the best minds, and the best experience of the pomologists of each district, will be brought to concentrate upon this labor.

Let me not be misapprehended in the statement just made in regard to the wide distribution of which the apple appears to be capable. There are soils and situations in all of the widely-separated regions alluded to, that are wholly unfitted to orchard culture, upon which it were folly to plant an apple-tree; and yet, many of those may be rendered entirely suitable, if subjected to treatment suggested by science and executed by human ingenuity and industry; the missing element may be supplied, the compactness of the soil may be overcome by artificial comminution, and by that effected by aeration; the excessive moisture may be removed by surface and thorough drainage; other disqualifications, such as those of situation and climate, may not be so readily overcome; they have already been alluded to; and even in them we may hope for improvement with the advance of science.

Different soils may be designated porous and compact. Leaving out of view, for the present, their chemical composition, let us look to their mechanical structure. Porous soils are composed of materials that always allow of the escape

of superabundant moisture; they are generally underlaid by beds of diluvial gravels, or by rocks of a porous character. Such lands are peculiarly adapted to orchard planting. The compact soil, on the contrary, is made up of the finest materials, among which alumina largely predominates. Such are called clayey soils, or clays, and are among the most valuable upon the surface of the earth, not because alumina is a component of vegetation, but because the elements are all of them in a state of extreme comminution.

Clays are compact soils, not only by reason of the fineness of their particles, but because the predominating alumina swells and becomes pasty when it is wet, and thus prevents the passage of water through them. On this account, soils that are too compact, especially if they be underlaid by stiff clay subsoils, are not so well adapted to orcharding as those that are more porous. This is especially true of level lands, upon which water accumulates, to the great injury of the fruit-trees planted upon them; but even in hilly situations, with good natural surface drainage, the excess of clay is indicated by a spouty condition of the surface. So many varieties succeed in clayey lands, however, and some are so superior in their product when planted upon clays, we need not be discouraged by this apparent difficulty; it may be overcome by the ingenuity of the skillful farmer. Thorough or underdrainage will remedy all the evils of clay soils, and bring out their superior advantages. This will be more fully explained in another place. Much may be done toward removing the redundant moisture, even in the flat clay lands of the prairies and other extended plateaus, by the simple means of ridging up the lands with the plow. What is familiarly called "back-furrowing" enables the plowman to raise a ridge upon which to plant his trees, and at the same time he opens a furrow for the escape of surface water. While a portion of the redundant moisture is thus removed, another great object of drainage is not attained; I allude to the aeration of the soil.

From what has been said upon a previous page, it might be inferred, that as the apple may be cultivated upon soils of such great diversity as those that occur over the range of territory indicated, as well as upon the western coast of this continent, and in the temperate regions of the Old World, the peculiar soils that are characterized by their underlying rocks would be equally acceptable, whether these were granites, shales, sandstones, or limestones. Such is not the fact, however, and we have found, in this utilitarian age, that geology has much to do with the planting of an orchard. There are varieties that succeed better upon one rock than upon another, and there are those that fail to be remunerative when transplanted to a rock, which to them is obnoxious, though it may be a very paradise to other varieties.

These observations are becoming a matter of great importance to orchardists, and we may hope that the study of this subject will be developed into some certain data, and that the future discussions of our pomological societies will furnish reliable information to future planters.

The Lumber Trade.

A large part of our patrons receive their lumber from Chicago, and it is therefore proper that we give them some information in regard to the condition of the market. To this end we can do no better than to copy the circular of one of the oldest houses in the trade. It is probable that the present stock will rate firm during the winter, but we think the chance of a decline in the spring highly probable. On account of the low stage of water last spring a large number of mills received only a partial supply of logs, large preparations have been made for logging this winter and thus far the fall of snow has been all that could be desired. If things should go on as at present and the old and new stock get down in the spring, we may look to large additions over the last years stock, in that case prices must come down. On the other hand freight must remain firm if not advance which may possibly prevent much of a decline. On the whole we think a decline of two dollars on common lumber and fencing may be expected. In regard to country lumber dealers we have a word to say. There is no reason why lumber in the country should not be sold as low as in the city adding rail road freight. Our country dealers can purchase by the cargo as low as city dealers, they can load and ship as cheap as it can be put in the yards, and certainly it can be piled as cheaply in the country as in the city, ground rents are much less in the country and so is the cost of living. "Well," says the country dealer "we do not sell so much." That is true and the very point we are coming to. All the best customers get their lumber direct from the city, consequently your business is reduced to a small amount. Now on all these orders you might have made a dollar on every thousand feet and the purchaser get his lumber of you at the same price as in the city. Let us take for instance Mr. B., who wants twenty thousand feet of common boards, at the present rate, say twelve dollars, the bill would be about as follows:

Cost of 20 M. feet lumber \$120.....	\$240 00
Exchange $\frac{1}{4}$ per cent.....	60
Freight \$5 per M.....	100 00
Unloading.....	5 00
	<hr/>
	\$345 60
Average cost per M.....	\$17 28
You purchase the same lumber by the cargo at \$10 per M.....	\$200 00
Freight.....	100 00
Exchange.....	50
Commission in purchasing.....	5 00
Unloading.....	5 00
	<hr/>
	\$310 50
Profit to the dealer.....	\$35 10
Suppose you put this in the yard at the further cost of piling, 50 cts....	\$10 00
elling and rent of ground \$1 50....	30 00
	<hr/>
	\$350 50

This would make an average of \$17 52 per M.

Cargoes of mixed lumber costing at this time \$11 per M. will run one fifth clear and contain a good proportion of common, selling one to two dollars higher on account of extra length. It will be seen that the dealer would have made \$35 10 but no he must charge a higher profit and away goes his best customers to the city. When our country dealers pursue a rational course we think they will change the retail trade in lumber from the city to the country. Cheap ground rents, cheap living and lower rates of insurance all point to the country as the place to store large lots of lumber and where it is wanted for use. Within the past three years we have purchased over a hundred thousand feet of lumber at the Chicago yards and have saved from two to four dollars on a thousand feet, yet the country dealers might have made at least a hundred dollars profit and we none the worse for it.

We have made this article longer than we intended and will add the annual report and prices current of lumber, shingles, &c.

CHICAGO, December 15, 1860.

The trade for the past year, both to manufacturers and dealers, has been fairly remunerative. The amount manufactured and sold is considerably less than that of 1859. Prices during the latter part of the season have been such, that there has been a paying margin for both the dealer and manufacturer, which has to a certain extent made up for the losses of 1858. The wants of the country are such, that if the present grain

crop moves forward during the winter and early spring, the comparatively small stock now on hand will be disposed of before the opening of navigation—at least, all saleable kinds. As will be seen below, the stock is far less than that of any previous year for the last five years. There being a small stock of Lumber in the country, it cannot be otherwise than that all of the present stock will be wanted before the opening of navigation to supply the trade.

During the summer the stock of shingles and lath became nearly exhausted, and consequently prices advanced to such an extent that it stimulated the manufacturer to such exertions to supply the deficiency, that the stock now on hand falls little short of what it was last year.

Dealers generally hold their lumber, shingles and lath, firm'y at our quotations. The trade is as usual during the month of December, rather quiet, but fair for the season.

The stock of cedar posts now on hand is only about half the amount of last year, there being only 50,914 against 101,016 last year,

STATEMENT showing the quantity of Lumber, Shingles and Lath, on hand at the close of the season for five years, with amount received and sold for four years.

On hand at close of Season.

Year.	Lumber.	Shingles.	Lath.
1856....	128,400,000	22,224,000	20,948,000
1857....	173,474,000	29,521,000	27,385,000
1858....	128,456,000	1,273,000	10,245,000
1859....	118,157,000	24,903,000	13,479,000
1860....	94,166,000	21,754,000	10,336,000

Received during the Season.

Year.	Lumber.	Shingles.	Lath.
1856....	456,673,169	135,376,000	79,235,000
1857....	459,639,198	135,832,250	80,130,000
1858....	273,020,506	127,565,000	44,559,000
1859....	302,397,931	166,554,284	49,518,000
1860....	266,591,172	134,158,000	30,509,000

Sales during the Season.

Year.	Lumber.	Shingles.	Lath.
1856....	414,574,000	124,675,000	73,693,000
1857....	323,961,000	135,913,000	61,699,000
1858....	313,144,000	203,297,000	45,868,000
1859....	287,593,016	130,224,500	31,261,806
1860....	170,425,172	112,204,000	20,473,000

PRESENT QUOTATIONS.

First Clear, dry.....	\$28 00@30 00
Second Clear.....	25 00@26 00
Third Clear Boards.....	17 00@20 00
Third Clear, 1½ and 1½ inch.....	18 00@20 00
Common Boards.....	12 00
Stock Boards, as to quality.....	13 00@15 00
Fencing.....	12 00
Short Studs and Joists.....	12 00
Long Studs and Joists.....	13 00@16 00
Clear Flooring.....	24 00
Clear Flooring, dressed.....	26 00

Common Flooring.....	15 00
Common Flooring, dressed.....	16 00@17 00
Clear Siding, dressed.....	14 00@16 00
Common Siding, dressed.....	12 00
Square Timber, Long.....	14 00@18 00
Square Timber, short.....	12 00@14 00
Shingles, A 1, shaved.....	3 50
Shingles, A 2, shaved.....	2 50@ 3 00
Shingles, A 1, sawed.....	3 50
Shingles, A 2, sawed.....	2 00@ 2 25
Lath.....	2 50
Posts, common and good.....	10 00@12 50

HILLIARD & WOOD, Chicago.

Correspondence Chicago Tribune.

The Farm and Garden.

CAMPAIGN, Ill., Dec. 24, 1860.

WHAT CROP SHALL WE SEED AFTER ?

Considerable discussion has been had as to the best crop with which to seed down to meadow and pasture. One of our city farm-writers recommends oats as the best, from the fact that the heavy foliage would shade the young plants. Oats, as all farmers well know, when the crop is good, has such a large amount of leaves that the ground is so completely shaded that nothing can grow beneath it; or if it survives, it is with a sickly, feeble existence. For this reason, we would never recommend oats as a suitable crop with which to seed down.

WINTER WHEAT is a much better crop for this purpose, and when grass or clover seed is sown on the light snows, it can be done much better than when the ground is bare, for with the snow it is easily seen whether or no every part of the ground is covered—a very important point in the seeding of grass lands. But winter wheat is not always at hand in the north half of our State, and we must then choose some other crop. At the farmers' meetings held in the evenings during the last State Fair, several persons complained that their grass seed had failed, and in some cases, after it had come up it died out. In the South part of the State, winter wheat is always, or nearly always, the crop with which the meadows are seeded. Now, we insist that the grass will always be a good stand if the seed be good, and that it be sown before the first of March. If grass seed is over a year old, but little of it will grow, hence we

have innumerable failures with old seed. Grass seed needs no harrowing after sowing, but it must be sown before the frost ceases to pulverize the surface. After the ground is settled, a roller should be passed over the field to more perfectly pulverize the surface, for such small seeds as the grasses require that the soil be in very fine tilth. On the greyish white soils of Egypt, south of the T. H. & Alton Railroad, it is highly important to sow early, as the heat of the sun on this soil is such that unless the plants are well rooted before the season is much advanced, they are pretty sure to be killed by heat and drouth; we think this will account to our southern friends for their oft repeated loss of seed. In the central and north part of the State, Spring Wheat is probably the most convenient and best of all our crops to seed with. It is sown so early that the grass and clover is well started during the cool moist days of spring, and as the grain gives it only a partial shading, it continues to grow, and will often be found covering the ground with a thick mat of grass, and much of it headed out at the time of harvest, and after harvest, produces a large amount of feed. Not so when grown with the oat crop, with which, if it survives, it makes but a feeble growth. In sowing with spring wheat, it should be sown after the harrowing is complete and rolled. Barley, for the same reason, is also a valuable crop to seed with. Hungarian Grass and Buckwheat are worthless for this purpose. The lateness of the sowing and their dense foliage is destructive of the grass and clover seed. Some persons practice seeding in August and the first of September, by plowing the stubble, but this practice we look upon as expensive, and not as certain in its results as early seeding with winter and spring wheat, or with barley.

GRASS SEED AS A CROP.

Has become one of the great staples of the State, and for its superior quality is much sought after. The absence of Canada thist-

les, white daisy and other pernicious seed, is its great recommendation to the buyer. But to the farmer of the prairie there is another point of no small value, and that is the long, well-developed heads that our soil and climate give to this grass, making a large and sure yield; thus we never hear of the failure of a crop of grass seed. Of course the yield varies, but is always a paying crop.

BARNs NEEDED.

One reason why farmers do not more generally enter into the culture of this crop, is the want of barns. Thousands of bushels are lost annually for the want of barns in which to secure the seed. Almost every farmer who owns a barn and a herds-grass meadow, has grass seed for sale, in fact, unless he is of the most shiftless order of farmers, he must have it. We will suppose that he takes no particular pains to save it, yet the simplicity of the process is such that he cannot well avoid it, and all it really costs him is the cleaning it from the chaff, by passing through the fanning mill, which only needs an additional screen called a grass seed screen, costing some three or four dollars. In feeding out the hay, it is first thrown down on the barn floor, where nearly all the seed shatters out, certainly the best developed and ripest, just such seeds as will command the highest price. No threshing in this case is required, the half-grown and unripe seed is held in the chaff of the heads, and go out to the stock. In this way a barn filled with herds-grass hay will generally turn out more value in seed thus saved, than enough to pay the interest on the building, an item that should go far to encourage the building of more farm barns. On the other hand, if a farmer wishes to make a business of growing grass seed, he can save more by having a good barn floor to thresh it on than by the usual out-door process. He can house the straw, which is valuable as a winter feed when kept dry. We have observed that the quantity of seed sent to market is in proportion to the number of barns, and as these

increase so does the crop of seed, not so much from the increased amount grown, as the greater proportion saved.

Our readers will bear in mind that we recommend sowing grass seed very early in the spring with wheat, rye or barley, and not with oats or other heavy foliage grain; to roll instead of harrowing; to see that the ground is in fine tilth, and that the seed is not a year old; to have barns if they wish to save it to advantage, a good barn floor is quite necessary.

RURAL.

Pork Packing in Chicago.

In Chicago there is two classes of pork buyers, one of them buying *on foot*, and the other the dressed carcass. A part of both classes of dealers purchase to ship East, in the same condition that they purchase them, while the others packs in barrels or tierces. We will now take our readers through one of the packing establishments for dressed hogs—it is that of Messrs. Leland & Mixer, near the Illinois Central Depot. The building is forty feet front and near two hundred deep, divided into two compartments, with a heavy wall and double iron doors. In the basement is a large number of tubs, which hold two thousand pounds of hams each, or ten barrels. On one side the shoulders and sides are dry salted and corded up like stone or wood; in another part of these two great underground rooms are huge tiers of barreled side pork ready for market. The large quantity of lard is sold nearly as fast as it is rendered. On the first floor is the cutting room, the store room and the office.

The dressed hogs are purchased from teams and at the depots. The owner seldom sells his own hogs, even if he is present, finding it to his advantage to pay the usual commission instead of trying his hand at a business that he is little accustomed to.

The hogs are unloaded and put in the weighing room; nearly all of them are frozen when received, it is therefore necessary that they be thawed before they can be packed, for this purpose they are put in the

steam room, which is large enough to hold six hundred hogs, and is warmed by the waste steam, which is led around the room in small pipes, and at intervals of a few feet, permits the escape of a small jet of steam. The hogs being hung up, this warm atmosphere thaws them in four or five hours, when they are passed to the cutting room, here they are cut up, the lard sent to the second floor for rendering, and the cut pieces below, where they are packed—the hams in the pickling tubs, the shoulders and part of the sides dry salted for bacon, the feet to the souse room, and the heads to the lard room above. A large portion of the second floor is filled up with packing barrels, made of thoroughly seasoned timber, but to insure perfect safety in that respect, they are further submitted to some weeks of thorough seasoning, which places them beyond risk of leakage. The salt used in packing is solar salt, but for the hams, Liverpool ground salt is mostly used. We would advise our farmers that the Onondagua solar salt is much more valuable than the common boiled salt for packing—its cost is but a trifle more. It is a matter of surprise to us that our country salt dealers do not keep it on sale; if once our farmers get in the habit of using it they will not use the other if they can avoid it.

The basement is kept well aired and cool. It is well known that pickled pork cures much better in a cool dry cellar than a damp warm one. If any of our readers have a warm, damp cellar, we would advise them not to put their pork in it, but rather in some open shed, where it will not injure it to be frozen. Hams in pickle should not freeze, for they should be taken out every three days and re-packed, as recommended in our last number.

The lard room is one of the most interesting, here is a steam boiler which furnishes the steam to render the lard. The vat or kettle containing the lard is upon the plan of the "Mott Furnace," steam at forty pounds, instead of fire, being the heating

element; no steam is admitted to the lard, as in the old steam process. So soon as it is boiled enough, the steam is withdrawn, and the lard drawn off into a cooler and thence into barrels; the rapid cooling makes it white, providing that it is not cooked so much that the *scraps* color it, great care is taken in this respect, for if the lard is not as white as the driven snow, it will not pass for No. 1.

Here is another lesson for our good housekeepers: cook lard just enough to throw all the water from off the lard, not pressing the scraps, cool rapidly, and you will have the snowy article. The scraps can then be pressed and this lard put by itself. We should have mentioned that the vat or kettle is covered, but not so close that the steam that arises from the lard escapes. The heads are also rendered, and make a large quantity of lard; this is used in the manufactory of lard oil, for which it is more valuable than the best lard. In this lard department, the greatest neatness prevails, and no one purchasing lard from this house need have any scruples about its purity. In the slaughtering houses they make another quality of lard known as the rough lard by our farmers. How often that is palmed off as the first quality we cannot say, but it is generally sold to grocers and retailed by them. Farmers in the northern counties very generally slaughter their hogs before shipping, while those of the central are shipped alive. In the one section is a large number of small farmers who send off five to twenty hogs each; these are generally well fattened. The rough lard more than pays the expense of killing, and on the whole they return more *net* profit than when sent in alive. They are sold by commission merchants in the city, who return the proceeds generally by certificates of deposit on Chicago banks, or as directed. Thus the grower and packer are brought together at a small comparative expense. On the other hand, the large pork growers of the great corn zone ship their hogs alive, and visit

the city in person; but as we said before, pay a commission for selling the same, as though they were not present, with this difference, that they are in the market to direct the holding over, in case of a *flat* market, and to look after the feeding. The small farmers in that part of the State, selling on foot to the dealers who ship. For ourself, we should prefer the plan of our northern farmers, and slaughter, as in this case we pay but one commission, but in the other we pay two, one of which is generally a pretty round one. It is not so much our province to advise as it is to give information, leaving each one free to pursue his own course. We often find one inconvenience growing out of the practice of shipping on foot—our village dealers are often under the necessity of sending to the city for mess pork, hams, bacon and lard. Now, if farmers were in the habit of slaughtering their own pork, these dealers would pack sufficient for their customers.

[From the Ohio Cultivator.]

Wintering Sheep.

Notwithstanding there has been so much said, and so many have given their experience in regard to sheltering stock, yet some seem to be incredulous about sheltering sheep. In the fall of 1858, I started into the winter with about 80 fine sheep without any shelter. But O! how I came out! Against spring opened up, I had 66. But that was not all. I had gone to the expense and trouble of getting two very nice bucks; and from about 50 ewes I raised about half as many lambs, by raising four or five by hand. Was this all? No! When I sheared them, I put what wool I had got off my dead sheep in among my other wool, and then my 66 fleeces did not average three pounds.

I thought a good many things; but the most I thought was that something must be done, and then the next was how to do it. I have a double log barn set up on blocks, and I finally concluded I would make some stables under that. With a very trifling expense and a few days' work, I got them all comfortably fixed for last winter. I wintered about 80 again; and I lost but two old ewes; that were old enough to die anyhow. From 47 ewes I raised 44 lambs without any trouble. My fleeces averaged over 3½ pounds. Instead of coming into the house in the morning with my countenance fallen and my mind perplexed with vexation and disappointment, and telling my wife that another of my sheep had died last night, or that two or three ewes had dropped lambs and lost them, or would not own them, or something of that kind, I would come in and with joy

countenance tell her how my sheep would skip and play when let out of their comfortable lodgings, or that some of my ewes had lambs and doing finely, and instead of hearing the old reply of "Oh pshaw!" I would receive a smile of cheerfulness in return.

I would like to give my views and experience and manner and amount of feeding, and something on the cost, etc., more fully, if it would remove any doubts on this subject, but perhaps you think this is enough for the present. But I must and that for the greater part of this nice state of affairs, I give credit to information obtained from the *Cultivator*.

Profits of Wheat vs. Corn.

A few evenings since, we listened to a discussion of the above at one of our district school lyceums. Most of the disputants were large farmers, whose experience on the subject is valuable. The question was treated with great candor and fairness on both sides, and we take pleasure in transferring the leading features of the debate to the pages of the FARMER. According to the census, the crops of wheat and corn for the year 1859, in the county of Champaign, were, for wheat, eleven bushels, and of corn, thirty-one bushels per acre. This average makes no allowance for waste land and for highways, which would make the average much higher. The year 1859 was below the average in both these staples.

Mr. B. opened the discussion on the side of wheat, and set down the expense as follows:

Plowing one acre	\$1 50
Sowing and harrowing	1 75
Rolling	50
Seed	1 00
Harvesting	1 50
Stacking and threshing	1 25

\$7 50

Eleven bushels wheat at 85 cents

9 35

Leaving for use of land

\$1 85

The above is for winter wheat.

CORN.

Plowing	\$1 50
Harrowing	50
Marking, planting and rolling	1 50
Cultivating four times	2 00
Harvesting	2 00
Shelling	1 00

\$8 50

By thirty-one bushels corn at 30 cents

9 30

For use of land

\$0 80

Difference in favor of wheat \$1 05.

In the above the yield is based upon the crop of 1859, which was below the average. The same speaker set the average of wheat for 1860 at eighteen bushels, and forty of corn. The wheat at seventy-five cents would show a profit of six dollars, while corn at twenty-five cents would only leave one dollar and fifty cents.

Mr. V. followed on the side of corn. He put the expense of wheat culture at \$7 50 also, and the yield at eight to fifteen bushels, with a few exceptional cases, a little higher. The cost of corn culture per acre, at four dollars per acre, and the yield at sixty bushels per acre, worth twelve dollars, leaving a profit of eight dollars per acre. He estimated the wheat at twelve bushels, worth ninety cents a bushel, say \$10 80, leaving a profit of \$3 30. Difference in favor of corn \$4 70.

Mr. V. said that taking his crops for the past five years, the average has been forty-eight bushels per acre, and the average price had been at the crib twenty-five cents, leaving corn, on an average, ahead of wheat six dollars per acre. The most scientific farmers, he said, had failed to make the culture of wheat profitable, while farmers of ordinary abilities could always make good crops of corn. He further insisted that farmers would still enhance the value of corn by feeding, and that to do so was the true policy; corn he looked upon as a safe crop, while the uncertainty of the wheat crop made its risk for the small farmer too great.

Mr. J. D. B. replied in favor of the wheat crop. He took the ground that the estimate of Mr. V. in regard to the cost of corn was too low; that the farmers had mainly failed with winter wheat, sowing wheat after wheat, or rather sowing a mixture of wheat and chess, the latter being the most hardy, had, after two or three sowings, proved the most abundant. His experience with spring wheat had led him to believe that it would pay better than the winter wheat. Had he

prairie or clover sod, he might sow to winter wheat, but even then he would prefer the risk of spring wheat. The principal reason of failures with spring wheat was sowing it on ground plowed in the spring, and with oats. This, of itself, was sufficient to render the crop uncertain. He considered spring wheat comparatively a certain crop. Of course it would not do on low, swampy land as well as corn, but on good, dry prairie it was always a paying crop, when properly put in. The ground should be deeply plowed in the fall, and sown early in the spring, as soon after the 20th of February as the soil and weather would admit, he cared not whether the frost was all out or not, if it was so that it could be harrowed in; if the ground was dry he would roll, if not, wait until the wheat was up. He would not like to sow after the season had advanced sufficiently to plow. By sowing early the crop could make its growth during the cool part of the season, and be out of the way of the chintz bug. Mr. B. said that all farmers were willing to admit that a good crop of wheat was more profitable than corn, but that the objection was the great risk. If they would put it in as he had indicated, use a bushel and a half of good, clean seed to the acre, the risk would be no greater than with a crop of corn. He would not be confined to the wheat crop alone, for that at the most could only occupy a part of the season, at that part, fortunately, when the corn was at rest. He would grow both corn and wheat, as neither one of them would fill up the whole time of the farmer; that though he expected the wheat crop would pay the best for the labor employed, yet it was necessary to plant corn to prepare the land for wheat. He was for a judicious rotation, and one of the values of the corn crop was to make the land clean for wheat. He believed that with fair culture spring wheat would average not less than twenty bushels to the acre, and putting the labor at nine dollars, and the crop at fifteen, would leave for the use of the land six dol-

lars, while the corn crop at fifty bushels, which would be an average, with good culture, would sell at twelve dollars and a half, the cost of which delivered at the station could not be less than ten dollars. He was reared in Central Illinois, and was well aware of the strong prejudice against spring wheat, but he was satisfied it was but prejudice, and he was glad to know that valuable staple was beginning to be appreciated. He cited instances in the neighborhood where spring wheat had been sown in season, and had always produced good crops. In the year 1858, when farmers, as a general thing, did not get more than a return of seed, the crops properly put in yielded twelve bushels to the acre. The failures was not in the seed or climate, but in the mode of culture, and as we now understand what was needed, we could go on successfully with its culture. He would call attention to the uniform good profit of the crop in the north part of the State; most certainly we have as good if not a better soil, our climate is more favorable, and he could not see why we could not be at least equally successful. He predicted that spring wheat would soon take its place among our staple productions.

Mr. A. L. B. took the side of corn. When he came to this county in 1856, wheat was the main crop. He had a good crop that year, but could get but fifty cents a bushel. (A voice—"Enough for it considering the oats in it.") Corn was worth seventy-five cents; he had grown corn since. He would ask if wheat was so profitable, why farmers planted all their lands in corn? He would put the cost of wheat at nine dollars the acre, and yield at twenty bushels, worth fifteen dollars, but he would not like to warrant twenty bushels to the acre.

COST OF CORN.

Plowing per acre	\$1 00
Planting and seed	35
Plowing four times is common with Turner's Illinois Cultivator, will cost	75
Husking forty-five bushels at	1 35
Shelling	1 80
Hauling to station	1 80

\$7 05

Forty-five bushels at 25 cents.....11 25

Use of land and profit \$4 20

While the profit on good crops were about the same, yet he preferred the corn for the certainty of the crop.

Mr. F. cited numerous authorities to show that the culture of spring wheat was becoming a favorite crop in the northwest, and that during the past eighteen years it had been steadily gaining ground.

Mr. A. would give his voice for corn; his experience in wheat had been a failure, and so far as profit was concerned, nearly so in corn. He did not think there was any particular virtue in fall plowing for wheat. Twelve bushels he considered a fair average of wheat, as had been demonstrated for the last five years. Last fall he plowed part of his land, and finished the 10th of March; sowed the 15th and rolled; yield twenty-five bushel; the fall plowed rather the best; anything will grow best with spring plowing; plow just before you sow or plant, and you will have the best crop. I would plow in the spring. Mr. A. put the cost of wheat at the farm at \$7 69 per acre, exclusive of use of land, and the value of twelve bushel the average, at \$9 60, leaving for use of land \$1 91.

COST OF CORN.

Plowing.....	\$1 50
Harrowing.....	50
Marking off.....	06
Planting.....	17
Seed.....	04
Three times cultivating.....	81
Husking 40 bushels and hauling to market	2 35
Shelling.....	60
Total.....	\$6 03
To this should be added use of tools.	
Deduct forty bushels corn at 30 cents....	\$12 00

Use of land and profit \$5 97

The affirmative or wheat side of the question carried the day.

In looking over the foregoing arguments, it will be seen that both parties were well agreed as to the cost of cultivating an acre of wheat, only a dollar and a half apart, nor were these consideration come to at the time, but each person had made a memorandum,

and brought it with him. The wheat men themselves reaching as high a figure as their opponents, one on each side putting it at \$9 50, while one on each side put it at \$7 50, and one at \$7 69. In the culture of corn the variance was much greater, some not counting the cost of implements, and none that of re-planting.

The conclusion that we came to from hearing the argument was, that the cost would be about as follows:

Plowing.....	\$1 50
Harrowing.....	50
Marking off and planting.....	50
Four workings.....	1 50
Husking and cribbing forty bushels....	1 75
Shelling.....	1 25
Marketing.....	1 50
	<hr/>
	\$8 50

The above would pay fair wages to man finding team and tools. With an average price of 30 cents, it would leave for use of land \$3 50, which is a good rent. Take into consideration—it is then in good condition for a crop of spring wheat, and we can well afford to grow corn; with the new cultivator, with which one hand can tend sixty acres of corn, and the profits must be still better by lessening the cost. It is, therefore, evident that corn and spring wheat have a close affinity to each other, and make up a good rotation, to which, if clover and herdsgrass be added, we shall make farming more profitable. We are just entering on the time when farmers will vie with each other for the best crops, and how to grow the greatest values with the least labor, instead of running over the greatest number of acres.

Great farming, small crops and poor living, we hope, have had their day, and we hope to see in their place small farming, with good crops and good living.

Ownership of Roads and Fencing.

A judicial decision of considerable importance has been rendered in Connecticut, by the Supreme Court of that State. The case arose in this way. The selectmen of Simsbury had, for a certain sum of money, granted a man a license to turn a cow into the highway. The owner of a tract of land bordering on the road, claimed that the feed in

the road adjoining his premises was *his* property and not the property of the town. He brought a suit for trespass, which went to the Supreme Court and was decided in his favor. The Court held that in opening a highway, the fee simple, the absolute ownership of the soil, was not vested in the public, but only the right of way. The public had control of a road as far as was necessary to make a convenient passage, but no farther. If a road were abandoned by the public, it again became part of the property from which it was originally taken, and this was additional proof that the title to the soil occupied by the highway was vested in owners of the land adjoining. The public having nothing but the right of way, the grass and feed on the road were therefore the private property of adjoining landholders. The following are the words of the Court:

"The owner of land covered by a highway has the exclusive right to the herbage growing thereon, and a by-law of a town giving liberty to the inhabitants to pasture their cows in the public highways, under certain regulations, passed under the authority of a general statute (Acts 1855, ch. 64) empowering towns to pass such by-laws *has no validity.*"

REMARKS.—We believe that the same general laws, that is, the common law, is in existence in this State, and the like results might be obtained in our courts. Our Supreme Court has been on both sides of this question, which involves no small interests. It would be difficult to so frame a general law that would be satisfactory alike in all parts of the State. In the northern counties, it is pretty generally understood that the owners of stock are under obligations to take care of them; while in Egypt, cattle are considered free commoners. We have had no small experience with both systems, and are free to confess that our preferences are strongly in favor of every man taking care of his own stock, and either keeping them within his own enclosure or herding them.

The most common and best material for fencing is post and boards. Three boards to a panel will be sufficient for all stock except sheep and hogs; to fence against the latter two more have to be added, these, at sixteen dollars the thousand feet, will cost, including nails, twenty-nine cents per rod, and for a farm of one hundred and sixty acres, counting half the fence on three sides, and all on one side for highway, with two cross fences, cutting the farm into forty

acre lots, and we have seven hundred and twenty rods, multiply this by thirty, the cost of the two extra boards, nails, and putting on, and we have an outlay for hog fence, of two hundred and sixteen dollars, just for the value of prairie feed. This is not all, the small farmer may not have this amount of money to spare, or he may not wish to keep a large lot of hogs, yet, to protect his crops against the long-nosed rooters of his neighbors, he must stand guard, lose his crops, or make this extra fence, for what? not for himself, for he will find it cheaper to make a hog pasture of five or ten acres, and confine his hogs where they will thrive, instead of having them roam over the prairie seeking mischief, but for his neighbor, who has perhaps squatted by the road side, rents some distant corn field, and keeps a large drove of hogs to annoy his neighbor. Cattle never do as well on the prairie range as with cultivated pastures. In the early settlement of the country, when stock growing was the one great feature of the State, there might have been some excuse and warrant for such a practice, but now, when the country is becoming more densely populated, and a mixed husbandry obtains, a change could be made to advantage compelling every person owning stock to look to it that they do not trespass on his neighbor. We have no statute law on the subject of fencing, except to regulate the line fences between adjoining farms—all other fence laws rest on the common law, upon which the decision was made, which we have inserted above. We are aware that others hold a different opinion in regard to enclosure laws, but if they will look close, the above will be all they can find. Should any of our readers wish to discuss this subject farther, we shall be pleased to hear from them.—Ed.

Great Premiums for Subscribers.

An experience of sixteen years with the *Ohio Cultivator*, has convinced us that the system of offering sensational premiums, indulged in by many of our contemporaries, is deceptive in char-

acter and vicious in practice. We shall put the value into our papers, and make *them* the attraction, instead of hiring people to take them, by the offer of silly sugar plums. We are down on all shams, and this practice is becoming one of the greatest shams of the age.

REMARKS.—We most cordially indorse the above. We like to see things rest on their merits. Now and then a person makes out well in canvassing for subscribers on that plan, but to the mass of such the offers are deceptive. It is but a remove from the bogus jewelry **DRAWS** of the thousand and one speculators. This whole gift system is an outrageous swindle, whether paraded in barrooms or churches.. If the good sense of the community does not step in to arrest its progress, it is to be hoped that the courts will do so. Many of the gifts offered by our contemporaries are in themselves valuable, and in many cases they must greatly reduce the profit of the publishers, yet we think the system a vicious one, as they have to go but one step further and deal in less valuable ware. This bogus gold jewelry costs some fifteen dollars the hundred pieces at wholesale, and is rated from fifty cents to five dollars at retail, when sent out as gifts. The bookseller who makes the gift at the cost of fifteen cents, and sells his book for fifty cents more, pockets a profit of thirty-five cents, at the same time the spoony thinks he has made from fifty cents to five dollars. We hope to see the agricultural press give up the system of gifts and garden seeds, and leave a measure of such doubtful utility to others.—ED.

Bread Making by Machinery.

It is well known that in the cities and villages a large part of the bread is made by bakers, who also supply no small amount of cakes and pies. This, in the domestic economy of the household labor, is no small item, and especially when we take into consideration that bread making is a laborious effort, and that to have good pies and cakes, skill is necessary. To those who can avail themselves of these assistants of housewifery will have relieved themselves

of a large part of the drudgery of the kitchen, thus lessening their domestic help, or giving them time to attend to other more desirable duties. When in Chicago a few days since, we spent a couple of hours in looking through the great Steam Mechanical Bakery on Clinton street, near Randolph, under the superintendence of H. C. Childs. Mr. Childs was absent at the time of our visit, but the foreman, Mr. W. P. Dutton, very kindly did the honors of the house. We first went to the fourth floor, where the sponges are set for the bread, and here the mixing is performed. The flour is all sifted before it is worked, taking out all lumps, strings and splinters of wood that accident has mixed with it. The dough is delivered on the third floor and put in large troughs to rise, these are covered tightly and the room kept warm. On one part of this floor is the pie department, in which three male and three female pie makers are at work. Here the utmost neatness is observed, as in fact it does throughout the several departments. The pies are all made by hand, and sent below to be baked, in the basement, in a mammoth brick oven, as done by other bakers.

The dough is cut, weighed and made into loaves by hand. The cracker room is also on this floor, and the machine for rolling out the dough, preparing and cutting, is directly in front of the oven, which, having its foundation in the basement, comes up to this floor and receives the loaves, and slowly carries them down into its heated portals, and again returning them to the same floor ready converted into bread. The oven is the most remarkable part of the establishment. Unlike all other ovens, it is kept constantly hot with a supply of hard coal, which is spread over the bottom, away down in the basement, the gasses and smoke passing through the flues in the side of the great furnace, while the heat ascends up the crater to do the baking. The crackers or bread are placed on cars, some four by five feet, with a sheet iron bottom. A door

opens — a long arm with a clutch is thrust out from the back of the oven, seizes the car and hauls it into the glowing furnace — down it goes with a steady motion; another is pushed out from the opposite side, unloads its baked treasure, and passes along the iron track, stands a minute to receive its load, when the door again opens and it follows its predecessor, and thus there is a continuous round, letting in by one door and discharging by the other, and all this by the muscles of the huge monster who is hard at work in the basement. Cakes, plain and ornamental, are made by the hundred, daily, these are all done by hand, and baked in the common oven, three of which, of large size, project far under the sidewalk. Flour, lard, butter, eggs and sugar are here in large supply, ready to be worked up. A dozen large bread carts are busy in delivering the products of the bakery to the retail dealers, who distribute it to their customers. Except the small amount retailed for the neighborhood and country custom, it is all sold at wholesale and delivered to the dealer at his shop.

The demand for crackers is large, and hundreds of barrels are sent into the country weekly. To the people of the city this vast bakery is a great labor saving invention, turning out a better article than most city housewives are capable of doing, in fact the whole product of the bakery is of the first class, and far superior to most of the home worked bread. This is not the only bake shop using steam works, but it is the only one in the whole west, so far as we know, where the baking is done on such an extensive scale. Farmers' wives cannot expect the aid of these patent bakers, but they can and should insist that when new improvements are procured for the farm that the kitchen should receive its due share. When we look upon the hundreds of poor, worn out stone ovens, where the baking of the family must be done, and see a hundred and fifty dollar reaper wasting out its value exposed to sun, wind and storm, we think women have some rights that their husbands ought to respect.

For the Illinois Farmer.

A Talk with the Editor.

MR. EDITOR: — My modesty demurs to the "liberty" you have taken with my initials, but if the full name of a contributor is an earnest of the truth of what he asserts, or tends in the least to secure the attention of his readers, a tiller of the soil who seeks and communicates instruction through the columns of a public journal, ought not, perhaps, to complain when the editor exercises his conceded privileges. Henceforth, however, should any of the facts or observations I may send you be deemed worthy a place in any department of the FARMER, please consider the signature appended hereto all that is needed for the identification of the writer.

PICKING APPLES.

Let me here supply an important omission or two, which I notice in my last paper. First, my method of *picking* apples. I use half bushel baskets, with wooden hooks attached to the handles; when filled, they are lowered from the tree into the wagon bed, not emptied, as is the usual custom, but conveyed in the wagon to the house, then carried into the cellar and carefully emptied. I know this is not a very expeditious plan, but I think it pays, especially when the varieties are very choice. Good apples are very easily bruised, and every farmer knows, or ought to know, that a bruise upon an apple is not an addition to its keeping qualities. A tender fall apple may be kept till mid winter by careful handling.

GOPHERS AGAIN.

I ought to have stated that the best time to give gopher hills a "good raking down," is just before a rain. They do not appear to fancy a superabundance of water. Pity it is that they and all their congeners were not left to the tender mercy of the element, through some oversight of grandpa Noah.

The plan I recommended for their extermination, has been partially tried by an enterprising and prosperous neighbor of mine, who, by-the-by, I am glad to know, subscribes for and reads the FARMER. (And were I not apprehensive that the statement might stir up your modicum of vanity, I would tell you that this gentleman assures me that the "FARMER" is worth to him more than four times its cost. But this you may put in brackets.)

PLANTAIN.

I did flatter myself with the hope of being able to announce to you that my efforts to exterminate this most annoying of all weedy annoyances had been crowned with complete suc-

cess. Five times, at intervals of six days, did I, with a sharp scythe, shave it off; but the process, while it destroyed every vestige of white and red clover, timothy and blue grass among which it grew, seemed to stimulate the plantain, and accelerate its growth; and it appeared, finally, to have taken complete possession of the ground from which I tried to dislodge it. Is there no way to eradicate this troublesome weed but through the instrumentality of the plow? Then, alas! for our beautiful lawn. (a)

YELLOW DOCK.

Some eighteen months ago, while on a visit in Scott county, say twelve or fifteen miles from Jacksonville, one of its old citizens invited me to ride with him out to what is called the "North Prairie," promising at the same time to show me a body of land equal in beauty and fertility to any I had ever seen.

The day was fine, the roads admirable, and the country through which we passed, magnificent. We visited the splendid farms of the Messrs. Hitts, strolled among their herds of broadbacked Durhams, and paid our respects to their famous twenty-five hundred dollar bull. Returning, I freely acknowledged that my friend's description, glowing as it was, did not come up to the grandeur of the landscape; "but," said I, "there is one drawback that, to my eye, mars the beauty of it all."

"What is that?" inquired my friend.

"Why, the everlasting quantity of this confounded dock that you see almost everywhere around us."

"Well, really," said he "I never noticed it particularly before. Why, just see; it is in the fields, on the high ground, along the swales, by the road side, along the lanes; and look at that flourishing bunch in that deer yard. I've no doubt now of its being pretty thick in my own pastures, too."

"I dare say," said I, "and it seems to be in a fair way to take possession of the country,"

Now, the dock is a great nuisance — at least I so regard it — but it is comparatively easily destroyed. Cut it off about half an inch below the surface of the ground three or four times during the summer, let the last cutting be done very late in the season, and in a year or two it will disappear.

Have you ever been struck with this peculiarity belonging to the dock, to-wit: the long period in which its capsules retain their seed. If a stalk goes to seed, and remains undisturbed through the winter, not a seed will fall from it, and in the spring it may be gathered and de-

stroyed, without any danger of scattering the seed in the operation.

Digging up the dock by hand is a tedious business, but the tedium may be very much relieved in this way: You take a survey of your meadow, and, after a little calculation, you conclude you see from four hundred to five hundred roots around you. The ground is soft, the weather warmish, and a slight symptom of the "spring fever" seems to be crawling about the spinal column. But you say to yourself, now I'll take my spade and dig up one hundred of those dock roots. The task is soon accomplished, but the number was found in a much smaller area than you at first imagined. This awakens curiosity, and you begin to wonder how many hundreds there are, and so you make up your mind to find out by actual count, and thus you proceed by spells, through the week, perhaps, until you have dug up thousands. (b)

In my next, I shall want to say a word in relation to neighbors' duties, in regard to the weed question.

JOHN R.

(a) We know of nothing better than the hoe to destroy this weed, cut it up just below the surface at the time of flowering. As blue grass is slow to come in, we would add white clover and herdsgrass to fill up the spaces until the blue grass shall have taken complete possession of the lawn. Plantain and white clover are alike in one respect, they appear to flourish all the better for being trampled, and it is possible that a heavy seeding with white clover might prevent the plantain from taking possession. Plantain does not like shade as well as the clover, and the herdsgrass might thus be made use of to hold the plantain in check. We have little personal experience with this weed in the west, and will be glad to hear from those who have.

(b) Yellow dock is a great pest, and we regret to say that it has already too firm a foothold on our farms. When it once gets into the meadow, its spread from there is rapid. Nothing but the spade and plow will root it out. Hundreds of our readers will no doubt thank our correspondent for calling attention to it.

We shall be glad to hear from you often, under any signature that you may choose.—

Ed.

Meeting of the State Horticultural Society.

On Tuesday, the 18th inst., the State Horticultural Society met at Bloomington. It was not our good fortune to be present, previous business engagements preventing. It was the first meeting of the kind in the State since the N. W. F. Association met in Chicago that we have not attended, and in which we have not taken an active part; but if we were not present in body, we were in spirit, and we shall, therefore, though at a late day, give the readers of the *Tribune* a synopsis of the proceedings, taken from the *Pantagraph*, and a day with Dr. Warder, who made us a call on his way home.

The proceedings are to be published in pamphlet form, but as only a thousand copies are ordered, we feel more at liberty to give the leading features in advance.

In consequence of the short and imperfect notice, the meeting was a small one in point of numbers, but containing some of our very best pomological talent.

FARM TREES—THE COTTON-WOOD.

Mr. C. R. Overman recommended the Cottonwood among the deciduous trees, as valuable for its rapid growth and ease of propagation, it growing readily from cuttings. It is true that flies and worms infest it, but not to an injurious extent. It makes good fire wood and rails, which proved durable. Several others concurred, but would not recommend for ornamental purposes. It was good for orchard protection and narrow timber belts.

GOLDEN WILLOW.

Mr. Phoenix called attention to the value of the Golden Willow. (b.) It was of rapid growth, valuable for both posts and rails, also desirable for its great beauty. Mr. Overman said it had one drawback; it is infested with an ugly aphid that colonizes in great numbers on its shoots, and drops upon the grass, making it unpleasant to be about the trees. Mr. Whitney has eight hundred of these trees in one field. It makes a superior charcoal, and is also good for fuel—can hedge with it on wet land by driving stout stakes of it five feet long, about fifteen inches apart, and a foot deep.

SILVER POPLAR.

The main objection to this beautiful and rapid growing tree, was its habit of sending up suckers. In a blue grass turf that is not disturbed, it is not troublesome. At the road side, where the ground is well tramped, it loses the propensity to sprout, and it was recommended for this situation.

THE MAPLES.

The silver leaved, the common soft, and the sugar maple were all considered valuable. Mr. Overman thinks the maple the most valuable of trees; they must grow more and more popular. They are eminently useful for shade, for furniture, for fuel, for coal, or for beauty. The maples as a class, and especially the soft maples (c.) are very desirable.

A motion to recommend the maples as a class, and especially the silver leaf maples, for all pur-

poses of grove and ornamental trees, was agreed to.

THE CATALPA.

Mr. Huggins suggested the Catalpa as a valuable tree for Central Illinois. Agreed to.

THE ELM.

The White Elm, Red Elm and Corky White Elm were discussed and recommended. Several persons considered the Red Elm the most valuable for railroad ties.

The tulip tree, linden and black and sweet gum, were agreed to for the central and southern part of the State.

AMERICAN CHESTNUT.

Mr. Phoenix said that it was in demand and that it was of easy culture. Mr. Edwards had found it hardy. Mr. Galusha had found it difficult to transplant. Gov. Wood has at Quincy, trees of three generations of Illinois growth. It was recommended for further trial. (d)

EVERGREENS.

The White Pine was recommended for Central and Northern Illinois.

AUSTRIAN AND SCOTCH PINES.

Dr. Kennicott said they did well in all parts of the State. Mr. Galusha would as soon transplant them as apple trees; the only trouble is that the roots must be kept moist; water thoroughly at planting, if the soil is dry, never afterwards, then mulch thoroughly. Dr. Kennicott transplanted eight hundred last spring and lost none; he puddles them both at digging and setting. Mr. Shaw said evergreens should not be shipped in October. Fall planting of evergreens was condemned. These pines were recommended for general culture.

NORWAY SPRUCE.

Mr. Galusha moved to recommend the Norway Spruce as the best evergreen. Agreed to.

BALSAM FIR.

All agreed that it was a fine tree when young, but would not bear age, losing its lower branches. A great variety of opinion was expressed in relation to the value of this tree; it was recommended for the northern part of the State.

RED CEDAR.

This tree was recommended for extensive cultivation for lawn screens.

AMERICAN ARBORVITÆ

Was recommended for screens and ornamental hedges; and the

EUROPEAN LARCH

For ornamental purposes.

STRAWBERRIES.

A running debate was had on Strawberries, without coming to any definite conclusions. Every member appeared to have his favorite. The upshot of the matter is, that Wilson's Albany will continue to be planted, for its large yield, and, if too sour, will be sweetened. McAvoy's Superior, Longworth's Prolific, and Extra Red will continue to please, in spite of the new brood-dignags.

THE CURRANT

Came in for a small share of talk, which resulted in recommending the Red Dutch, the White Grape, White Dutch and the Victoria.

GRAPES.

The Diana, Catawba, Clinton, Isabella and Concord were discussed. The Catawba, Clinton and Concord stood the highest.

RASPBERRIES.

Messrs. Huggins, Galusha, Edwards, Bragdon, and Warder, discussed Allen's Raspberry; condemned it for its suckers, but Mr. Huggins considered it valuable for his part of the State; he treated suckers as he would so many weeds.

Mr. Galusha moved to recommend the American Back Cap and the Purple Cane for Central and Northern Illinois, at least. Which was concurred in.

Dr. Warder said the Purple Cane was not a new raspberry, but had been long known under various names, and is always a favorite. The fall was recommended as the best time to plant this fruit. Dr. Warder said that the people did not prune their raspberries sufficiently. They needed more thorough pruning. He also spoke in favor of the Kirtland Raspberry, which he pronounced one of the best of the American Reds.

ELECTION OF OFFICERS.

President—Dr. J. A. KENNICOTT.

Vice-President, 1st Dist.—Dr. E. B. Kittoe.

“ 2d “ J. W. Wakeman.

“ 3d “ S. G. Minkler.

“ 4th “ Nathan Overman

“ 5th “ J. H. Stewart.

“ 6th “ J. Huggins.

“ 7th “ — Hostetter.

“ 8th “ Chas A. Kennicott.

“ 9th “ G. H. Baker.

Corresponding Secretary—O. B. Galusha.

Recording Secretary—H. C. Freeman.

Assistant Recording Secretary—C. T. Chase.

Treasurer—S. G. Minkler.

The next annual meeting of the Society is to be held in Chicago on Tuesday, the 3d day of December, 1861.

The members signed a petition to the Legislature asking for the passage of a law making fruit stealing a felony.

GOOSEBERRIES.

Mr. Galusha would recommend the Houghton and the Pale Red. He sets plants five feet apart in the rows, and the rows six feet apart, mulches with straw and manure in the fall. Dr. Warder: this berry sells the best when half grown. In Ohio they rake off the berries with a little wire rake, upon sheets spread under the bushes. When green, they are sold at a dollar a bushel in Cincinnati. For family use they should be ripe, as then they are much superior. The above were recommended for general culture.

BLACKBERRIES.

Mr. Huggins recommended the Lawton Blackberry for Central Illinois, which was adopted. He says it is fruitful, hardy and very luscious when fully ripe. [Glad to hear it.]

CHERRIES.

The Committee on Cherries for Northern Illinois, recommended Early May, Belle de Choisey, May Duke, Belle de Magnifique, Late Duke and Reine Hortense. To which, on motion of Dr. Kennicott, English Morrello was added, and the list adopted.

RHUBARB.

The Early Tobolsk for very early, and Lincolns and Myatt's Victoria for the main crop. "Cahoon's" was entirely discarded as of no value. Deep culture and abundance of manure are the requirements of this plant. The above were the favorites adopted for a select list.

APPLES.

The list recommended by the committee for Northern Illinois next came up:

Little Red Romanite, said to be third rate, good for baking and sweet pickles, good bearer and keeper, its popularity is well known. The remainder of the list was not discussed. Some discussions were had on pruning the apple. Dr. Warder said prune in winter for wood, and in summer for fruit, but never when the wood is froze.

On Wednesday evening Dr. Kennicott delivered a lecture on the subject of the Mistakes of Tree-planters, and on Thursday evening Dr. Warder lectured on pear culture. During the meeting C. T. Chase read an essay on the Education of the Laborer. Other papers and reports were read, which will probably find a place in the published report.

The labors of this Society are valuable to the public, and we shall hope that the Legislature will appreciate this and give it that aid that is required. Enough should at least be allowed to furnish a stenographic reporter at its next session, and for the printing of ten thousand copies of its transactions.

OUR NOTES.

(a) The Cottonwood is the most rapid grower of the whole poplar tribe, and for protection, in a single row, must be valuable. The wood is soft, difficult to split in many specimens, decays rapidly, even more so than Baswood or Linden. Very objectionable for a street or yard tree, as it is filled with swarms of flies which breed large numbers of worms, which in turn feed on its succulent leaves, thousands of which are made abortive, producing a sort of *nut-gall*, filled with numerous progeny, and making the tree unsightly. The cotton often fills the air with its fleece, covers the shrubbery and lawn. It is readily propagated by cuttings; it springs up on all new plowed land, and transplants well when young, but not so readily when old.

(b) This willow has not been fully appreciated; it is of rapid growth, valuable for fuel, posts and rails, and should find a place in the timber belts; it grows from cuttings, but should be cut back near the ground, at a year old, to make a straight trunk. The twigs of this willow are used almost exclusively at Cincinnati for tying up the grape vine. A belt of this would cost the farmer or orchardist but a trifle, as an abundance of cuttings can be had for the cost of cutting and ship-

ping. Our trees are not infested with the flies alluded to.

(c) There are two varieties of hard or sugar maples in our woodlands. The most common is the *Acer Saccharinum* Sugar Maple; the other is the *Acer Nigrum*, or Black Sugar Map'le. This is more abundant in the central part of the State, is a more rapid grower, the leaves are broader, less bayed and cut than the other, and slightly downy beneath. It makes much the finest tree. Jacksonville is very well supplied with this variety, but the best avenue that we have seen is on the grounds of Arthur Bryant, near Princeton. The soft maples are the Silver Leaf, *Acer Dasy carpum*, and which flourishes on almost if not all our soil. Of this variety we have ten acres in timber belts. The other is the *Acer Rubrum*, Red Maple or swamp Maple. They are propagated from seeds. We consider these the most valuable of all our trees for timber belts.

(d) We think this tree will not give good satisfaction in all parts of the State. Because it thrives well at Quincy is no reason that it will thrive in Champaign or Peoria, as there is a wide difference in the soil.

The soil of Quincy is one of the best, for timber growing, there is none superior. This peculiar formation is found far north of that point; east into Morgan and south into Madison. Wherever that peculiar soil is found, the chestnut and the grape are remarkably vigorous, while in the clay loams they are less vigorous. We would recommend the planting of the chestnut as an experiment, and if the growth is less vigorous than at Jacksonville and Quincy, be not discouraged. If it will not make a forest, it will give you both beauty and fruit in a more moderate way.

The Culture of Sorghum.

We predict that the census returns will make a good showing from Iowa, Illinois, Indiana and Ohio, in favor of this plant. But comparatively little has been said about it the past three years, but it has been steadily on the increase, and is fast becoming a favorite. In the county of Champaign, a large amount was made, and the demand for barrels at the season for working was beyond the supply. Old whisky barrels, and in fact any thing of the kind that would hold sirup was in demand, in addition to those furnished by the coopers, tubs, buckets and jars have had to be used.

In our own State it is safe to say, that twice as much sirup was made last year as in 1859, the year for which the census was taken, and we hear of numerous parties who will extend their operations, and of others who will attempt it for the first time.

We should not be surprised to see the breadth planted next spring more than doubled. It is now demonstrated that for sirup it is valuable and cheap, especially for cooking purposes, being preferred to common molasses by all who have given it a trial. It has been made into sugar, but as to its economy for this purpose we know little, but from present indications, we shall look forward to practical results.

The sorghum, when it first comes up, is a very delicate plant, small and of slow growth at first, but so soon as the warm weather of June comes on, and the ground is freely stirred, it makes a most prolific growth. Some have recommended starting the plants in hot beds, so as to get an early start, but we doubt the economy of this course. We have grown a small patch of it two seasons, and would plant in drills, and treat it the same as in the culture of broom corn, the details of which can be found on page 126, in the last volume of the FARMER. In its habits of growth it is almost identical with that of broom corn. If either is planted too far apart, they grow coarse and of less value, if too thick the plants are weak and do not mature well. Of course the sorghum will not require so much seed, as it suckers, or rather sends up several main stalks from one seed. Nearly, if not all, the mills are too small, and with smooth rollers. We are under the impression that rollers made in the style of those for sugar cane, that is, with grooved surface, would answer much better than the smooth ones; they would not require to be as large or so strong, but should be sufficiently powerful to press the cane perfectly dry, so that it would answer for fuel. Some of our political economists look upon this cane as ample to supply all of our common brown sugar and sirup, thus making us less dependant on the South for our sweetening. This, to some extent, will be true, but, in our humble opinion, it will do more to extend the consumption of sugar and sirup than any one other fact for some time, and it is not probable that an appre-

erable smaller quantity would be imported for some time. The large duties now imposed on sugars, amounting to one third of value is for the protection of the sugar interest of the South, and if the duty was withdrawn, it would hardly be worth while to bring the sorghum in competition with the cheaper and better sugars of the South.

Opinions of the Press.

It is customary to give the opinions of the press, especially in any new enterprise of the kind. We shall, therefore, to a limited extent, avail ourselves of this privilege, and copy what a few of our cotemporaries have to say of the ILLINOIS FARMER.

The past three years have been unfavorable to the agricultural press, and even at this time the excitement, moved by the lever of secession, usurps the place of the study of agriculture, and until the public mind shall have become settled down to a more calm point, we may not forward to a rapid eminence of our calculation.

The past year has demonstrated to us that the people of the State are in favor of a practical agricultural paper devoted to home matters, and a medium through which to discuss the peculiarities of our soil and climate.

When the present Editor took charge of the FARMER, he had little time to devote to it, with one of our county papers on his hands, besides corresponding for two others, together with his large private business, it is a wonder that he has been able to perform what he has, and had it not been, as he says, a labor of love, we are sure that it would not have been done; but we enter the new year under more favorable auspices, the editor has made arrangements to devote more

the enterprise, and with this view we have enlarged its size. With the exception of a weekly series of letters to the *Chicago Tribune*, his pen will be devoted to the pages of the FARMER. Practically engaged in farming, orcharding, the nursery and the garden, the readers of the

FARMER may rely upon having practical advice in the industrial interest in which they are engaged.

TERMS.

Instead of offering premiums for subscribing, thus hiring canvassers to obtain subscriptions, we have put the price so low that the inducement is in the price of the paper. We believe that there is scarcely a post office in the State but that if some friend will show the paper, that a club of twenty cannot be obtained. It is certainly the cheapest agricultural paper in the Mississippi Valley, and being devoted entirely to industrial pursuits, does not come in contact with the family papers that are sent forth in such abundance, both from the city and county press.

THE PUBLISHERS.

THE ILLINOIS FARMER comes to us bearing the imprint, as Editor, M. L. Dunlap, the successful nurseryman, and famous "Rural" of the *Chicago Press and Tribune*. This is fortunate for the *Farmer*, for no man in the whole Northwest better understands what is required to advance the Agriculture and Horticulture of this region, or who can tell what he knows more graphically, as the pages of the *Farmer* abundantly testify. With him theory and practice go to ether. Exercising a thorough supervision over a nursery and a farm of several hundred acres three or four miles south of Urbana—going everywhere a railroad will take him—seeing everything pertaining to his chosen pursuits, he yet finds time to write a great deal for the instruction of farmers and horticulturists. Early last June we paid him a visit, and was greatly surprised to see the wonders he had accomplished, starting upon the bare prairie only three years before. Don't remember, friend Rural, the famous feasts of strawberries and cream which thy better half, "on hospitable thoughts intent," prepared for us and the patriarchal household?—*Henry County Dial*.

THE ILLINOIS FARMER.—The December number of the *Illinois Farmer* is out with its usual punctuality.

Mr. Dunlap is a practical farmer, and is noted for prosecuting with energy any enterprise which he may undertake. Should he devote his whole literary labors to his own paper, and try experiments upon his farm, and give the details thereof, we have no doubt but that he would make his paper one of the most interesting Monthlies in the State.—*Chicago Democrat*.

ILLINOIS FARMER.—The December number of this useful periodical is at hand. It completes the fourth volume. S. Francis, Esq., who has heretofore edited the paper, having departed for

Oregon, the publishers have secured the editorial services of M. L. Dunlap, well known to every farmer in the State as "Rural." Mr. D. contributes a large share of the matter in the present number. The change promises to be a decided improvement. "Rural," as everybody knows, is a *real* farmer and horticulturist himself, and is moreover a good writer and a wide-awake man. The *Farmer* comes at only \$1 per year, and "Rural" will make it worth many times that sum, or we miss our calculation hugely.—*Bloomington Pantagraph*.

THE ILLINOIS FARMER.—A few hours previous to our leaving the Fair Grounds at Jacksonville, we *dropt* in at the office of the *Illinois Farmer*, we had noticed its editor, M. L. Dunlap, circulating around generally, and making himself particularly useful. We admired the ability he evinced in reconciling and deciding an intricate question that had arisen between two prominent officers in relation to the classification and entry of a sewing machine. We were more favorably impressed with his familiarity with all pertaining to Agriculture, and determined to know more of him and his paper, we procured from Rural the back numbers of the present volume of the *Illinois Farmer*. On glancing over them we were at no loss to account for his proficiency in his favorite pursuits. The following extracts from his inaugural will convince the most skeptical that in this instance the right man is in the right place:

"You will perceive that it is the hand of the farmer, hardened by toil, that the brow is one from which the sweat of toil has been wiped from its sunbrowned surface, and that our muscles have had free exercise with the varied employments of our calling. You will thus see that no carpet knight of pen and sissors is to do the honors of the fireside, and give you lessons in farming, but *one of your own number*—one who is daily taking lessons in the cultivation of the farm, the orchard and the garden. To sum up, we must make it a *farmer's paper*; for being *but a farmer ourselves* we cannot be expected to make it anything else if we should try."

We are confident that the "*Farmer*" is not as generally known, and has not the circulation that its intrinsic merit entitles it to, in the north-west corner of the State. While eastern agricultural papers have a fair circulation, our own, published amongst us, edited by men who have a practical knowledg of all that pertains to *our soil* and climate, are in a great measure neglected. This should not be the case, and while we would not disparage the value of any agricultural paper, for we are firm believers in the doctrine of the diffusion of knowledge—till we prefer, and shall advocate the use of the *domestic article*. We would advise those who wish information in all that pertains to *our farms, gardens and orchards*, to examine the papers devoted to these subjects published in Suckerdome. We would further suggest that they send to Springfield for the *Illinois Farmer*, an agricultural monthly, that, under its present editorial management, has few equals and no superior.—*Galena Advertiser*.

"RURAL" INTELLIGENCE.—From the last number of the *Illinois Farmer*, at the commencement

of the fifth volume of that sterling agricultural journal, we notice that Hon. M. L. Dunlap, known for several years to a very wide circle of our own readers as "*Rural*," the author of the excellent correspondence in our columns over that signature. He has assumed the chair editorial of the *Farmer*. His connection and management of its columns will be most valuable to the proprietors of the paper, Messrs. Bailhache & Baker, and to their readers throughout the country. Mr. Dunlap is deservedly prominent among the agricultural writers of the Northwest, if indeed another has done more than he to bring about the union of skillful and intelligent "book learning" with practical farming. *Rural* is not afraid of books or the plow, and he can make good use of either and both. We congratulate the readers of the *Illinois Farmer*.—*Chicago Tribune*.

THE ILLINOIS FARMER.—Our farming friends who wish to keep themselves posted in scientific agriculture, should subscribe for this excellent paper. The *Farmer* is conducted by M. L. Dunlap, the well known "Rural" of the *Chicago Press and Tribune*. One of the best farmers in this county pronounces it an excellent work, and thinks every farmer should have it. One dollar per annum. Address Bailhache & Baker, Springfield, Illinois.—*Effingham Pioneer*.


AGRICULTURAL JOURNALS.—The January number of the *Illinois Farmer*—number one of volume five—comes to us with the salutory of M. L. Dunlap, Esq., as editor. He makes a bow in a genial chat of two columns. Well known as "Rural," there is no doubt that he will make a valuable farmer's paper. The *Farmer* is published by Bailhache & Baker, Springfield, Illinois, at one dollar per year, and is well worth the money. *Alton Courier*.

ILLINOIS FARMER.—This is a young candidate for popular favor, but is rapidly rising in the estimation of the farmers of Central Illinois, and has already taken a position in the front rank of agricultural papers. It is published by Bailhache & Baker, proprietors of the *State Journal*, Springfield, Ill. As its name indicates, its special mission is to promote the interests of the farmers of Illinois. It is edited by M. L. Dunlap, of Champagne, who is well known as one of the most successful farmers and horticulturists in Illinois. The work is published monthly at one dollar per year.—*Prairie State*.

THE ILLINOIS FARMER.—A *genuine, live, agricultural paper*, it should be in the hands of every farmer in the State, published monthly by Bailhache & Baker, Journal Office, Springfield, Illinois. M. L. Dunlap, Champagne, Illinois, editor. Terms \$1 per year.—*Seminary Bell, Mount Carroll*.

PERSONAL.—We had a call, on Saturday, from M. L. Dunlap, of Champagne, editor of the *Illinois Farmer*. Mr. D., in addition, is extensively engaged in the nursery business, and finds time to do a great deal of writing for miscellaneous journals, besides traveling somewhat extensively. But we conclude he bears it well, judging from his appearance.—*Attica (Ind.) Ledger*.

Editor's Table.

 We cut the following from that sterling agricultural paper, the *Homestead*, published at Hartford, Connecticut, and commend it to all these Christian farmers who allow their cows the privilege of the lee side of a fence, their horses in an open stable, the hogs in the hay stack, and their hens in the cherry trees. We think if this has no effect on them, that practical Christian sermonizing will be useless in this case.—Ed.

"Barn-Yard Charity."

BY JAMES O. MILLER.

"A righteous man regardeth the life of his beast; but the tender mercies of the wicked are cruel." This passage can be found in the very excellent book of Proverbs.

I am not going to preach a sermon, for regular preaching is not in my line, although exhortation (that is of an agricultural character), usually is. But still there is on the face of this passage a statement certainly suggestive, if not alarming. It says, "a righteous man regardeth the life of his beast," consequently, he that does not regard it must be an unrighteous man, or a sinner. If this be the meaning, and I think it is, it also strikes me that the place that is to contain all the unmerciful men must be of quite a large size, or else it will be too crowded for comfort. There is also a remark somewhere, to the effect that true charity begins at home. I never could see the consistency of a man making himself wretched over the woes that afflict the world at large, when he pays no attention to the woes that afflict his family in the shape of green wood, or his stock in the shape of hard knocks, musty fodder and no stables. And the truth is, that when a man takes no kind care of his farm stock, the probability is that all his efforts to relieve human wretchedness, either at home or abroad, will be of the most economical character.

Genuine charity, if it exist at all in man, must exist as a sun casting its warmth and radiance in every direction—not like a mirror, that is bright on one side and dark as midnight on the other. Oh, no!—look at charity from any point and under any circumstances you please, and it still is a genial principle, going forth continually in the shape of kind words, gentle reproof, and benevolent deeds—not only to human souls, not only to kith and kin—but to everything in the wide world that breathes the breath of life.

The age in which we now live is famous for its grand efforts for human benefit. That is, a great day for good societies—missionary societies, anti-getting-drunk societies, etc. But there is one more I wish to see in full operation, and that is a National Howard Association for the Comfort of Farm Stock.

The *Homestead* is organizing such a society in

Connecticut, and I suggest that from this time henceforth every farmer and his wife in the great Connecticut valley consider themselves as an executive committee to attend to the animals on their own farms. Put up stables for all the cattle—they need them and have earned them. How can a man say his prayers at night, when the cattle whose industry secures him the comforts of life are shivering in a storm? Surround the barn-yard with a high fence or shed, so as to keep out the biting winds of winter. The south side needs it as much as any, for of all winter winds the southwest, loaded with chilly dampness, is as bad if not the worst. Make a few of the stables double size; they will be useful in the spring. Have a feeding place under some shed where a team of horses can be securely tied without being unhitched from the wagon or exposed to the weather. See that the winter wind does not blow your horses' manes in the stall—see that your hog pens are supplied with dry litter, and that your hens don't roost on a snow bank, before you write your name—

JOHN SMITH—the Philanthropist.

To a person who has not looked into it, it is surprising what a quantity of folly there is in this world. Everybody sets down as a rumb-skull the person who lit his cigar with a ten dollar bill. And so, not as flagrantly in the beginning, but not less really in the end, is he a fool who lets one ton of hay blow away, lets his cattle trample another under their feet, while they get rid of another ton by standing and shivering it off.

"I write as to wise men—judge ye what I say."

CATTLE KILLED ON RAILROADS.—The following decision of Chief Justice Gilpin, of Delaware, is in accordance with recently established views. The decision sets forth as follows: 1st. That a railroad company legally chartered has the unobstructed right of way over its own road. 2d. That it cannot be held in damage for any loss which owners of cattle may sustain if their cattle are killed or injured, while upon the track, and when due diligence and caution are observed on the part of those in charge of the train, to prevent said destruction and injury. 3d. That the company are not bound to fence in the land or farms along the line of road merely for the sake of keeping cattle off the track; but that it is the duty of owners of cattle to see that such cattle do not interfere with and obstruct the passage of the trains, and thus become trespassers. 4th. That persons who suffer their animals to roam at large upon the track, to the detriment of the travel by obstructing the road, are liable to a suit for damages therefor.

The above we cut from one of our exchanges. There may be some doubt as to the powers of our own Legislature in regard to the law compelling railroads to fence their tracks; as every day the opinion in favor of the common law is gaining ground, which is, that cattle straying from the grounds of the owner are trespassers. We call the attention of our farmers to the above.

Railroads have created a new condition of things, and we must conform to them; they are valuable institutions, not only to the country, but to the farmer. Let one of them stop running for three months and it would create a state of things along the route truly deplorable. Some might say we can do without railroads as well as we did before their advent, but they will soon learn that such is not the case; we have become accustomed to their use and great value, and it would take some time to unlearn these things.

While the railroads have so largely benefitted the country, the stockholders, as a general thing, have sunk immense sums of money, partly, it is true, from bad management, but no small amount from the opposition and ungenerous treatment from the hands of those the most directly benefitted. The past summer we had a valuable animal killed, but instead of claiming pay of the company, we laid the blame to our own carelessness in not supplying a broken bar through which the animal was enabled to let down the others and pass on to the track; had the train been thrown off the track and any one injured, we should have expected to have at least borne the blame for our carelessness. Thankful that no further accident occurred, we dressed our pet heifer, and determined on a more strict guard for the future. Notwithstanding these drawbacks, we would not wish the track off our farm, to lose the pleasure of seeing the world's progress, the passing to and fro of the herculean power that is carrying the arts and civilization to the furthestmost parts of the world.

We cannot close without urging farmers who are blessed with a railroad through their farms, to look well to their stock, that it does not stray upon the track.

SEEDS AND FLOWERS.—We are in receipt of the catalogue of B. K. Bliss, Springfield, Mass. Mr. B. has built up a valuable reputation for his seeds. The great care with which he has made his selections has been the means of guarding his customers from loss. Those of our lady readers in want of choice flower seeds will do well to send for a catalogue. His collection of bedding out plants is not only large, but select. Our florists will do well to consult his catalogue of new and choice plants.

THE MAGAZINE OF HORTICULTURE.—The January number of the volume twenty seven is on our table, and, as usual, filled with valuable and interesting matter to the fruit grower and the florist. Address Hovey & Co., Boston, Mass.

WHITEWASHING THE STEMS OF FRUIT TREES—Mr. Editor, can you not find a corner for a word or two condemnatory of the barbarous practice of whitewashing the trunks of fruit trees, not only rendering them unsightly, but causing much injury by closing the pores of the bark. It prevails extensively in this section.—C. DELAWAR, PENN.

[It is not injurious, rather beneficial, killing moths and insects, and prevents sun-scorching in severe winters. The outer bark has lost its vitality, and has no pores to get injured. When the tree grows, the trunk swells, and the bark cracks, through whitewash and all, and no injury results. As to the *unsightliness* of it, we have not a word to say in its favor.]—*Gardner's Monthly*.

Whitewashing trees in the fall or early winter we look upon as valuable in this State. The spring rains work off the lime, and the bark comes out clean and healthy. It reflects the winter sun from the trunks and protects them from winter killing, or scalding of the bark on the southwest side. We would not whitewash in the spring. We use a small amount of sal soda in the wash.

Another month and the note of preparation for the spring campaign will have ceased, and its active duties will have commenced. What the year will bring forth is beyond our ken, but the faint prophetic tread of armed thousands is wafted from the South, and thrills the Northern farmer with no pleasing emotions. May our good genius drive back the phantom, that it become not a reality, armed to strike the hand of labor; to take from the fireside those we love to be offered up on the altar of ambition. We hope that none will be called off by the trumpet's blast to leave their own fields for the field of strife. We are again on the high road of prosperity, and of progress, and to stop now, just when we had hoped to see our homes become pleasant—but it cannot be that the dark cloud will break forth—we shall deem it but a lurid shadow without the power to do us harm.

SWEET POTATO.—Our old friend Tenbrook, of whom we have purchased our sweet potatoes for seed for the last six or eight years, presents his card to the readers of the FARMER, and promises to sell at greatly reduced prices, by his private letter, offering to contract now at five dollars the barrel of three bushels. We doubt if his bins will bear the demand long at these low prices, if they do they must have been greatly increased. His Sweet Potato Culturist is an invaluable little hand book to all new beginners, and no damage to the old used hands.

THE OREGON FARMER.—Away on the other shore of our dominions,

"Where rolls the Oregon,"

men have carved out new homes and erected new altars. The Anglo-Saxon with his axe has hewed down the forest, and now looks out upon the broad Pacific, and asks if there is no more land beyond. But he will stop there for awhile, for his household gods are with him; the printing press, like a great speaking trumpet, is in his hands, and he sends back greeting to his brother of the east. The *Oregon Farmer* comes to us semi-monthly laden with valuable advice to our cis-Rocky Mountain brethren, and from which we gather some idea of the progress of the great industrial army in that interesting, but far-off country.

We clip a few paragraphs:

LARGE FREIGHT.—The steamer Oregon took out a cargo of seven thousand boxes of apples. Shipments like this will bring money into the country.

The apples sent from this port on the bark Industry to San Francisco have all passed into second hands. The price realized for choice winter fruit was eight cents, but a large proportion of the cargo were fall varieties, which, in consequence of their perishable nature, had to be forced upon the market at three, four and five cents per pound.

S. S. Miller, of Linn county, planted one Blue Neschanoek potato about the 20th of May last, which yielded 340 pounds of large, fine looking potatoes.

What does it mean that so many great orchards are to be sold by lottery in California? the fruit orchards failing there, or are there so many new orchards that they have become unprofitable? Orchards valued at two, four, ten, twenty, and one hundred thousand dollars—going for two dollars? Who bids—who will invest?

Chickens, dressed, six bits a pair! That pays well, does it not? A lot of 200 or 300 chickens would buy a heap of sugar, coffee and tea—not to mention other necessities.

Apples are selling at 50 cents a pound at Walla Walla. A man can't afford to eat there more than three pounds a day, especially as his labor is only worth by the day a \$1.50.

CALIFORNIA FRUIT MARKET.—*San Francisco, Nov. 24, 1850.*—ED. FARMER: The bark Industry arrived with 1,000 boxes fruit, 18th inst. Sales ranged 5c. to 8c.; much of it in bad order, the fault of the packer and not the ship.

Steamer Jonathan arrived 22d, with 4,500 boxes, and discharged yesterday and to-day. All sold at prices ranging from 5½c. to 10c.—one invoice at 12½c. Seven to eight cents is about the average. Previous to the arrival the market was very bare, more so than it has been since the

season commenced. Some half a dozen buyers from the interior were in town, so there was a lively competition on the wharf. Most of the fruit, as far as seen, was in good order, and of a much better class than the two previous shipments. I observe that farmers who pack and ship their own fruit, sort and pack it in a much superior manner to those who are dealing in it; and those invoices generally command the highest prices.

The bark Samuel Merritt arrived this afternoon and will discharge on Monday. She brings about 5,000 boxes. The fruit dealers predict a decline in prices from to-day's rates.

EXPORTS OF OREGON.—We export much—we import more, and that makes us poor.

California grown apples out of market.

From this last we would suppose that the California apples do not keep well, and this may account for the desire to sell out their orchards. If this is true, the winter supplies must come from Oregon. The *Farmer* is published at Portland at \$3.

The trifling sums awarded as premiums at most agricultural exhibitions are amongst the least inducements to exhibitors; the main-spring is the honor achieved by successful competition. But the honor is a very trifling one, if none but the few at the exhibition be aware of the fact. It is but justice to the competitors that the widest publicity should be given to the awards, and all agricultural societies should look upon it as one of the essentials to their success.

If it interests John Smith to read in print that he received the first prize for the best crop of wheat, it interests the public to know that that was Canada Club or Black Sea, or what not, and both parties are served.

FIELD NOTES.—The first two numbers of this new agricultural journal are on our table. We have given them a thorough perusal, and with pleasure we bear willing testimony to their value. That the *Field Notes* will take a high position in Western rural journalism is no more than we should expect from the talent and industry of its editor. If a quarter of a century's schooling is of any value, we may well look for it here. Col. Harris, so well known throughout the West, will now have an opportunity of enlarging his acquaintance. May his life be long and the *Field Notes* attain to a wide circulation, and always be at par when offered for circulation or on deposit.

THE CININNATUS AND JOURNAL OF THE AMERICAN PATENT OFFICE.—The *Cinnatus* and *Scientific Artizan* are now combined under the above

title. Both the matter and quality of the new work is highly creditable to the new publishers. Most of the old writers of both works remain, and the public will need no further guarantee that it will continue to hold a high rank among similar journals.

The West has long needed a work of this kind, where practical agriculture shall receive the aid of art. Here the inventor who would aid the West in developing her vast resources will find a firm and able friend, nor will he be compelled to take long journeys to the coast to secure that aid so much needed to perfect and secure his improvement. Agriculture, horticulture, and the mechanic arts and especially new patents, will be presented by an able corps of writers.

Two dollars a year. Address American Patent Company, Cincinnati, Ohio.

Publishers' Special Notices.

AGENTS—We do not appoint any agents; all are voluntary. Any person so disposed, can act as agent in any place.

ENLARGE YOUR CLUB.—Will not the friends of the ILLINOIS FARMER inquire how many copies of the FARMER are taken at their respective offices, and pass around among those who ought to have their names added to the list? Our terms are so low to clubs of ten and twenty that we ought to have one or the other made up at every office in the State, and at every office in Central Illinois, one of twenty or more. Will our friends, and the friends of practical agriculture see to it, and thus lay us under renewed obligations?

TO SINGLE SUBSCRIBERS.—You receive the only copy of the FARMER that goes to your post office. Can you not send one, two, three or more new subscribers, without any trouble? Try. Sample numbers, &c., sent free.

DRAFTS.—Those remitting us large amounts of money, will please send us drafts on Springfield or Chicago, less the exchange. If you send cash in a letter, be sure that is well sealed and well directed, to Bailhache & Baker, Springfield, Illinois.

THE FARMER AS A PRESENT.—Any of our subscribers who wish to make a present of the ILLINOIS FARMER for 1861, can have it at the lowest club rates, when sent out of the State. For fifty cents you can treat your eastern friends to a western agricultural paper. In no way can you invest that amount to so good advantage to emigration.


SEND NOW.—Any person who remits pay for a


club of ten or fifteen, or any other number at the specified rates for such clubs, can afterwards add to the clubs, and take advantage of the reduction. Thus a person sending us five subscribers and three dollars, can afterwards send us three dollars more and receive six copies.


TO THE CASUAL READER.—This and other numbers of the ILLINOIS FARMER will be sent to many persons who now see it for the first time. Will they not examine it, and if they like it, subscribe for it, and ask their neighbors to subscribe? Sample numbers, prospectuses, etc., sent free to all applicants. See terms elsewhere.


HOW TO OBTAIN SUBSCRIBERS.—The best way is to send for sample numbers. Any young man by canvassing his neighborhood, can easily make up a club of five, ten or twenty, but no time should be lost in doing so, for your neighbors may send east for their paper which, though valuable there, is much less so here, the difference of soil and climate putting them out of their reckoning when attempting to teach us western farming.

HOW TO HELP.—The friends of the ILLINOIS FARMER will find a prospectus in another column. We desire to suggest a few ways in which they can use it to advantage. 1. Show the FARMER to those who are unacquainted with it, and tell them what you think of it. 2. Send for prospectuses, and put them into the hands of those who will use them, and place posters where farmers will see them. 3. Get postmasters interested. They see everybody, and are efficient workers. 4. Send us the names of persons in your town to whom we can send prospectuses and sample numbers. 5. Begin now, before the agents of eastern papers get up their clubs. This last hint is especially important. Let us hear from you soon. See terms elsewhere.

 Clubs may be composed of persons in all parts of the United States. It will be the same to the publishers if they send papers to one or a hundred post offices. Additions made at any time at club rates. We mail by printed slips, which are so cheaply placed on the papers, that it matters little whether they go to one or a dozen offices.

 Correspondents will please be particular to give the name of the post office, county and State.

 Specimen numbers will be sent gratis, upon application.

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CURE COUGH, COLD, HOARSENESS, Influenza, any Irritation or Soreness of the Throat, relieve the hacking Cough in Consumption, Bronchitis, Asthma and Catarrh. Clear and give strength to the voice of

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Few are aware of the importance of checking a Cough or "Common Cold" in its first stage; that which in the beginning would yield to a mild remedy, if neglected, soon attacks the lungs. "Brown's Bronchial Troches," containing demulcent ingredients allay Pulmonary and Bronchial Irritation.

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At my office, I sell at New York prices, and give INSTRUCTIONS FREE OF CHARGE, to enable purchasers to sew ordinary seams, hem, fell, quilt, gather, bind and tuck, all on the same machine, and warrant for three years.

The following commendations are selected from a mass of similar documents, with which a volume might easily be filled. We feel gratified to know that many other persons of the highest literary, political and social standing in this country, have volunteered their warm approval of our Family Sewing Machine:

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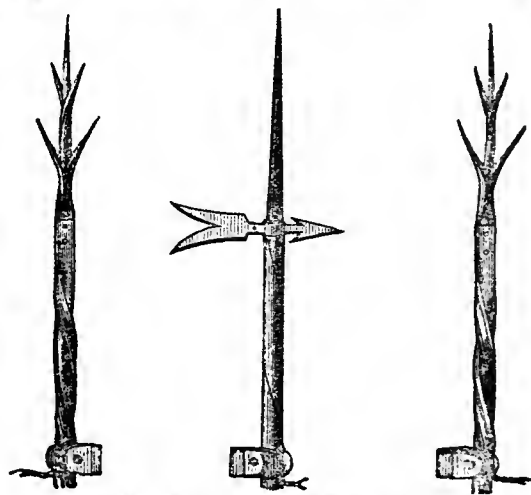
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PURE BRED CHESTER WHITE PIGS,
OF THE BEST QUALITY.**

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BLOOMINGTON, ILLINOIS.**

Eighty Acres Fruit and Ornamental Trees.

200 NAMED SORTS TULIPS, ALSO HYACINTHS,
Crocus, and a general assortment of Bulbs
and Flower Roots for Fall and Spring planting.
Nursery stock, Evergreens. Greenhouse and garden
plants—all at wholesale and retail at lowest cash
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F. K. PHENIX.

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GREAT REDUCTION IN PRICE!!

**GROVER & BAKER'S
CELEBRATED NOISELESS
FAMILY SEWING MACHINES.**

THE GROVER & BAKER MACHINE

Is simple in construction, easily learned, and with proper management, never gets out of order.

THE GROVER & BAKER MACHINE

Hems, Fells, Gathers and Stitches, and fastens its own Seams—thereby saving time and thread.

THE GROVER & BAKER MACHINE

Sews equally as well on Fabrics, from the finest Swiss Muslin to the heaviest Cloth or Leather.

THE GROVER & BAKER MACHINE

Sews from original Spools, without rewinding, and forms a Seam unsurpassed for Beauty, Elasticity and Strength.

THE GROVER & BAKER STITCH

Is the Double Lock Stitch, which forms a Seam that will not Rip, even if every Fourth Stitch is cut. It is the only Stitch which survives the Washing Tub on Bias Seams.

GROVER & BAKER

Carried off the First Premium for Sewing Machines this year, at the St. Louis Fair.

PRICE FROM \$40 TO \$100.

HEMMER, \$1 00.

SALES ROOMS,
NO. 124 NORTH FOURTH STREET,
Verandah Row, St. Louis.

WANTED—A RELIABLE AGENT IN EVERY
County in the State.
dec1



As accidents will happen, even in well regulated families, it is very desirable to have some cheap and convenient way for repairing Furniture, Toys, Crockery, &c.

SPALDING'S PREPARED GLUE

meets all such emergencies, and no household can afford to be without it. It is always ready and up to the sticking point. There is no longer a necessity for limping chairs, splintered veneers, headless dolls and broken cradles. It is just the article for cone, shell and other ornamental work, so popular with ladies of refinement and taste.

This admirable preparation is used cold, being chemically held in solution, and possessing all the valuable qualities of the best cabinet makers' glue. It may be used in the place of ordinary mucilage, being vastly more adhesive.

"USEFUL IN EVERY HOUSE."

N. B.—A brush accompanies each bottle. PRICE, 25 cents.

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Seventeen acres in nursery, closely planted. A large and complete stock of Apple Trees at very low rates, and a fine general assortment of carefully grown small fruits, Fruit and Ornamental Trees, Shrubs and Plants.

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THE McQUISTON SHELLER AND HORSE-POWER MANUFACTURED BY J. C. CARR.

For particulars address ISAAC P. ATWATER, Morris, Grundy County, Illinois.
The most perfect, substantial and economical Farmer's Sheller ever built.

BLOOMINGTON, April 17th, 1860.

Mr. Isaac P. Atwater:

Sir:—In answer to your questions, I will state that since 10th November last, I have shelled with the McQUISTON TWO HORSE POWER ELEVATOR SHELLER, over 45,000 bushels of Corn, with less than \$5 expense for repairs, and my machine is still in good running order and will probably shell as much more. I have shelled, cleaned perfectly and sacked 80 bushels in one hour, and can do it any day with good corn. Would not sell my machine at any price, if I could not get another just like it. Two light horses have done all this shelling and kept fat. I shell and ear my own corn at an expense of one and a half cents per bushel. Yours respectfully,
WM VREELAND,

Corn Buyer, at C. A. & St. L. Depot.

Mr. JOSEPH LUDINGTON, Corn Buyer, etc., at Depot of Illinois Central Railroad, Bloomington, says: I have shelled about 40,000 bushels since 20th November last, with about \$3 expense for repairs, running every day now. Have timed it one hour and shelled 75 bushels. Common average of every day is 50 bushels per hour. It is the most substantial, durable and economical Corn Sheller I have ever seen. Don't think it can be equaled.

Messrs. AUGLE & ALLER, of Bushnell, C. B. & Q. R. R., have shelled about 40,000 bushels since November last. Machine still in good order and shelling every day. Repairs have been trifling. Sheller and Power considered unequaled. Shells from 450 to 500 bushels per day, depending upon the quantity of corn got to it. Have never seen it fed as fast as it would shell.

Messrs. WYCKOFF & SHREVE, Bushnell, have shelled since November about 50,000 bushels; expenses for repairs not to exceed \$5; is in tip-top order now and shelling from 500 to 600 bushels per day. For economy and perfection of work, have no idea it can be equaled. Have sold a number of machines in the neighborhood and never known one to be in any way imperfect or incapable of giving the fullest satisfaction to the purchaser.

Messrs. COLE & WEST, also of Bushnell, have shelled with their machine 60,000 bushels since last November, and it is now running every day, and from appearances, will shell as much more without any but trifling expense for repairs. Never think of having to stop for any break down or repairs whatever. Can shell, clean and bag just any quantity of corn the men will put into it.

Mr. TAYLOR, of Kewanee, has shelled 35,000 bushels since November. Don't think he has had any expense for repairs. Has run a great many Corn Shellers, small and large, has never seen one before that he considered perfect in every respect. Has never seen two men feed it to its capacity. Thinks it capable of shelling from 500 to 700 bushels per day, if rightly managed.

And I might go on multiplying reports similar to the above, until it would cost me about as much to get you to print it as the profits on the 160 odd machines sold since last October would amount to. It will be understood that the above references are to single machines, that is, one Sheller and its Two Horse Power has done the work named.

If there is any Corn Sheller in the State of Illinois, of any capacity, capable of doing as economical and perfect work, or any Sheller of its capacity able to do as much work, with as little expense for repairs, I would like to hear of it. The parties above named are all responsible gentlemen, who have freely made these statements and volunteered their names as references.

MORRIS, GRUNDY COUNTY, ILLS. April 1860.

ISAAC P. ATWATER,

CAST IRON LAND ROLLERS, 24 INCH IN DIAMETER IN 13 INCH SECTIONS.

6 Sections \$45—7 Sections \$50—8 Sections \$66—All hung ready for the field.

TERMS—Cash on delivery at Railroad. Purchaser pay freights.

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Offers for sale a choice and large stock of Cranberry plants for Spring planting, adapted to elevated and low lands. These plants are young healthy and in a full bearing state. Price for my celebrated Bell and Washington varieties \$4.00 per thousand plants, Cherry variety \$2.50 per thousand, a liberal discount will be made on large quantities; for information on the culture, send for circulars. Also, for sale Blackberry Raspberry and Whiteberry roots \$1. per doz.

All orders promptly attended to and carefully packed for transportation, the name and directions should be distinctly written and the money a company the order, which may be safely sent by mail.

Address PAUL CHILSON, Bellingham, Norfolk Co., Mass.
January 1, 1861-2t.

DR S. BABCOCK, DENTIST, WEST SIDE

OF THE SQUARE, over Chatterton's Jewelry Store. Having permanently located in Springfield, and fitted up good and comfortable rooms, and being supplied with the best material and every description of dental implements, including all the latest improvements, DR. BABCOCK feels under no embarrassment in offering his services to the citizens of Springfield and vicinity, feeling confident that, with nearly twenty years' experience and practice in some of the larger cities of the Union, he can give perfect satisfaction in every operation he may undertake to perform.

Dr. H. pledges himself to perform all operations in his line in as perfect and substantial a manner as they can be done in St. Louis, Chicago or any of the larger cities.

Charges moderate. Chloroform administered when desired.

Jan. 17, 1861.—4t.

THE ILLINOIS FARMER.

VOL. VI.

SPRINGFIELD, FEBRUARY 1861.

NO. 2.

February.

Now, shepherds, to your helpless charge be kind;
Baffle the raging year, and fill their pens
With food at will; lodge them below the storm,
And watch them strict; far from the billowing
west.

In this due season oft the whirlwind's wing
Sweeps up the burden of whole wintry plains
At one wide waft, and o'er the hapless flocks,
Hid in the hollow of two neighboring hills,
The billowy tempests whelms, till upward
urged,

The valley to a shining mountain swells,
Tipt with a wreath high-curling in the sky.

THOMPSON.

No less now than when the poet sung of
wintry storms have we need to have care
of our live stock. February is one of the
stern winter months on the great far-stretch-
ing prairie, over which the hyperborean
blasts sweep with resistless fury. It is to the
winter months what June is to those of
summer. It is the month when,

"Stern, unyielding winter drives along.
The January thaw has closed its short career,
and the gates of the north are opened, and
from whence the great mountains of ice on
which sits enthroned the King of Winter
pours out their accumulation of arctic frost.
It is not only humanity to our dumb beasts,
but it is a matter of dollars and cents
whether we house them or let them shift
for themselves throughout this short but
wintry month. The corn field may answer
for the middle of the day, when the sun
gives a little warmth, but at night they
should be in the stables, under a shed, or at
least under the lea of a friendly grove or
timber belt.

In this month we must be preparing to
sow the spring wheat, and in the south part
of the State the weather will permit of its

being sown the last of the month. Will
some of our Egyptian friends try the ex-
periment of early seeding. We have little
doubt but that fair crops of this grain can
be grown in that part of the State, but we
beg of you not to try the experiment unless
you have fall plowed your ground to sow on,
we would not like to run the risk of plow-
ing in the spring. If there is any oats in
your seed, wash them out by using strong
brine; this will also destroy the smut.

If you have any winter wheat that you
wish to seed with, this is a good time.

Look to your corn fields, and, if possible,
finish husking; we know that it is an un-
comfortable time for this work, but during
the few sunny hours of each day something
can be done. Corn stalks that are to be
broken down and rolled in windrows to be
burned, should be attended to at once; for
so soon as the frost is out, this work cannot
be so cheaply done.

Fence posts should be got ready and
sharpened for driving, so soon as the frost
is out, and the ground is yet soft and yield-
ing. This is not only the cheapest but the
best way to set them; see that they are
placed top end down, or the reverse of the
way they stood when growing.

The wood pile is an important institution,
and should not be neglected; do not punish
the kitchen help, whether wife, daughter or
Biddy, with poor wood, or an old worn out
stove. If you want your meals well cooked,
and in time, or that this arm of the service
shall be always efficient, provide it with the
implements and munitions for active and
protracted duty. Purchase your groceries

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To the farmer who presents the best approved system of farm accounts, for the year 1861, will be awarded..... 10
Awarding Committee—Executive Committee of the State Agricultural Society.

FARMS, NURSERIES, ETC.

Best improved and highly cultivated farm, not less than 500 acres.....	25
Second best.....	15
Best improved and highly cultivated farm, not less than 160 acres.....	25
Second best.....	15
Best improved and highly cultivated farm, not less than 80 acres.....	25
Second best.....	15
Best improved and highly cultivated farm, not less than 40 acres.....	25
Second best.....	15
Best improved and highly cultivated farm, not less than 20 acres.....	25
Second best.....	15
Best arranged and economically conducted dairy farm.....	25
Second best.....	15
All exhibitors competing for premiums on farms, will be required to give the following statistics in writing :	
1st. The number of acres under cultivation, and the number devoted to each crop.	
2d. The number of bushels of wheat, corn, oats, and other grains raised, and the amount of land appropriated to each one.	
3d. The number of tons of hay, and the amount for each acre.	
4th. The amount of stock raised, fed and grazed on the same, viz: cattle, horses, mules, sheep, hogs, &c., and their probable value.	
5th. The number of hands employed and the cost of their labor.	
Best grove of cultivated timber, not less than 5 species.....	25
Second best.....	10
Best transplanted forest trees, not less than six feet high, for permanent growth, and covering not less than 1 acre of ground.....	10
Best germinated forest tree seeds, not less than 5 species, covering not less than 1 acre, for permanent growth, not as a nursery.....	10
Best arranged and cultivated nursery of fruit trees and fruit shrubs.....	20
Second best.....	10
Best arranged and cultivated nursery of fruit and ornamental trees, shrubs and plants.....	20
Second best.....	10
Same of grafted or budded apple trees, 1 to 4 years old.....	20
Second best.....	10
Best apple orchard, in bearing; not less than 100 trees, with names of varieties, and details, of management of trees, fruit and soil.....	25
Second best.....	15
Best pear orchard, not less than 100 trees in bearing.....	25
Second best.....	15
Best peach orchard in bearing, not less than 100 trees.....	25
Second best.....	15
Samples of the fruit in the orchard to be exhibited at the fair.	
Best peach orchard, in bearing, not less than 100 trees.....	25
Second best.....	15
Samples of the fruit then in season to be exhibited at the fair.	

Best quarter acre Osier willow, product to be weighed between the 1st of December and the 1st of January, and sample to be exhibited at Fair and sent to Society's rooms..... 10

DRAINING.

For the best experiment of underdraining during the year, not less than 10 acres..... \$50
To be accompanied in each case with—
1st. Statement of the situation of the land, previous to the commencement of the process; the kind and condition of the soil.
2d. The method pursued, with a particular account of the expense.
3d. The result, and increased value of the land, if any.

AWARDING COMMITTEE.

M. L. Dunlap, Chairman, Champaign, Champaign county; Wm. T. Hull, Greenville, and C. T. Chase, Chicago.

Competitors are desired to give notice to the Corresponding Secretary on or before the 1st day of June, of their intention to compete.

Statements to be furnished by applicants for Premiums on Farm Crops.

1. The land shall be in one continuous piece, measured by a surveyer with chain and compass, who shall make affidavit of the accuracy of the measurement, and the quantity of the ground.

2. The applicant and one disinterested person shall make affidavit, according to the forms annexed, to the quantity of grain raised on the ground entered in the premium list, which must accompany the application for premiums, together with a sample of the grain.

3. The object of the Society being to promote profitable cultivation, they do not propose to offer premiums for crops produced by extravagant expenditure, therefore, a detailed certified account of the expense of cultivation must be made. The expense of labor and manure should be particularly stated, and the kind of manure used. The statement must be in the following form :

To—loads manure, at \$— per load.....\$—
To—days' plowing, at \$— per day.....\$—
To—days' labor at \$— per day.....\$—
To—days' harvesting, \$— per day.....\$—
To days' marketing.....\$—

And thus each item of expense incurred in the cultivation and marketing of the various crops, upon which premiums are applied for, must be fully stated, and after giving credit for the product of the field, the balance must show the net profit realized.

4. The kind and condition of the soil, the quantity and kind of seed used, the time and mode of putting it in the ground, should be particularly stated.

Samples of grain and vegetables produced, to be exhibited at the State Fair, where practicable, and also to be sent to the rooms of the Board at the January meeting in 1862.

5. All the grain on the entire piece of land measured, must be weighed, and not the product of a square rod or two weighed, and the remainder guessed at. Corn to be measured in the ear, and an average specimen of not less than 20 bushels of ears shelled, cleaned and weighed, as above, after the 15th of November, and the number of bushels thus estimated, stated in the affidavit.

Forms of Affidavits.

County, ss.—A. C. being duly sworn, says he is a surveyor; that he surveyed with chain and compass the land upon which C. D. raised a crop of — the past season, and that the land was in one

continuous piece, and the quantity is — acres, and no more.

A. B., Surveyor.

Sworn to before me, this — day of —, 18 .

Justice.

County, ss.—C. D. being duly sworn, says that he raised a crop of — the past season upon the land surveyed by A. B., and that the quantity of grain raised thereon was — bushels, measured in a sealed half bushel, and that he was assisted in harvesting and measuring said crop by E. F., and that the statement annexed, subscribed by this deponent, as to the manner of cultivation, expenses, &c., is in all respects true, to the best of his knowledge and belief, and that the sample of grain exhibited is a fair average sample of the whole crop.

C. D.

Sworn to before me, this — day of —, 18 .

Justice.

County, ss.—E. F. being duly sworn, says that he assisted C. D. in harvesting, getting out and measuring his crop of —, referred to in the above affidavits, and that the quantity of grain was — bushels, as stated in the affidavit of C. D.

E. F.

Sworn to before me, this — day of —, 18 .

Justice.

The State Fair.

The next State Fair has been located in Chicago. In this we are not disappointed; the main argument is the want of funds, the Treasurer reported a deficit of \$1,903, against a surplus a year since of \$1,296—a difference of \$3,199, a matter of no small importance, and more than equal to the amount contributed by the State.

Chicago is a good point for a great Fair; it is not only convenient for our own State, as all the railroads lead there, and all of them will thus feel equally interested. The pressure of travel and the transportation of goods and stock will be borne nearly alike. Michigan, Indiana and Wisconsin will also contribute largely. Manufacturers from a distance will be more apt to attend, as they know a city like Chicago can furnish the accommodation and assistance. The truth is, that few of the interior towns have the means at hand to make our fair goers comfortable. It is this which, to a great extent, has made the St. Louis Fair such a success, as all those who attend find no difficulty in obtaining meals and lodging at the usual price. Yet we would not have the State fair located at Chicago permanently. If it does not pay so well, it is a benefit to the part of the State in which it is held; it gives agriculture a new impetus, as it brings

out thousands who will travel ten to fifty miles with their own teams and camp out, who would not go by rail and pay their hotel bills. This class of farmers must be reached; they are old fogies who have not waked up to the progress around them, and they need something unusual to arouse them. They are generally men of intelligence and good farmers, but have vegetated so long that they cannot appreciate that the world is moving around them.

A combination of the State Agricultural and Horticultural Society, with the Chicago Mechanics' Institute, will make a team of no ordinary strength, that cannot fail to draw. We shall be disappointed if, in the value of the exhibition and the number of visitors it does not excel that of the United States Fair held in 1859. In its management we will pledge our readers that they will leave that great hulk of humbug far in the shade. We learn that the premium list will reach \$20,000. Now, reader, how much of this will fall to your share? We have lost over two hundred dollars in the past five years by not competing for premiums. We have excused ourself for want of time, being mainly engaged during the Fairs in reporting its salient points. But what if we do not take a premium for every article that we exhibit, if we are fairly beaten we should feel none the worse, but try again, it is just this emulation that is of value, and to be engaged in it personally is of the greatest interest. If we exhibit, our neighbors will do the same, and thus the show will be more extended. We hope every reader of the FARMER will take something with him or her to add to the interest of the exhibition; let us arouse our State pride, if nothing else. Recollect that the premiums are to be paid in cash—that you have a chance to draw a fine prize out of this twenty-five thousand dollar fund, and to have your name written in the history of this State institution, which will go down to later generations. Will you not up and at 'em? Sow your spring wheat early, put

it in thoroughly, and try for the prize; look to your stock, that it is in good growing condition, ready for the trial; look carefully through the long list of industrial products, whether of the soil, the shops or the mine, and see what you can do; do not permit yourself to think that you cannot succeed, but do your best, and leave the result to a fair competition.

The Culture of Cotton in Illinois.

In the present aspect of affairs, it is well to take a wide survey of products that are capable of being produced in our State. Cotton, to within a few years, has been grown in the south half of the State in sufficient quantity for domestic use, in furnishing the warp of the "linsey" that formed the almost entire clothing of both sexes. Cotton gins were not uncommon, but of a cheap and rude structure. We believe that cotton has never been grown as a crop for export within our limits, but each family providing its own supply, which was carded, spun and wove by hand, the common hand card, wheel and hand loom being all the implements used. When the West was opened up to the commerce of the world by the introduction of steam on our rivers, there came with it a demand, or rather market for certain products which could be exchanged for textile fabrics, spun and wove by machinery driven by water power. the competition of which soon made the culture of cotton unprofitable, or rather this new condition of things made it more profitable to grow other staples to exchange for the manufactured products of cotton. The cotton gins were allowed to decay, and the culture of what had been one of the necessities of the age, was discontinued, not that it failed to grow, for of the certainty of the crop we hear no complaints, but of the want of cotton machinery to manufacture it.

Whether it would produce sufficiently abundant to pay for the labor of its culture at the present time, we have no data from the past whereby to form an opinion. When

we take into consideration that it is hardy, and that with our improved implements and modes of culture, we might make large advances over the early settler in this respect, we see no reason why it may not be again resumed as a profitable crop. To say that it was thrown aside because it would not pay, has nothing to do with the question at the present time, for then the old Bull or Bar-shire plows were in their glory—they paid then, but who would think of using them now? They are thrown aside for the steel clipper; so the old wheel and the hand loom have lost their music in the household, and the old-time "linsey" is among the lost arts, and now where the rivers beat against the rocks as they dash onward towards the ocean, the hum of fast revolving wheels and the ceaseless din of flying shuttles as they transform the snowy staple to long webs of cloth, with a rapidity that mocks at the slow motion of the fingers of the industrious wife, but repeat the story why cotton ceased to be the staple of the State, and "linsey" to grace the shelves of the country store. Hand labor could not compete with machinery, and as no attempt was made toward cotton mills, the attention of the farmer was turned to other products.

Now that we have all the improved implements to cheapen its culture, and can employ the same machinery in its manufactory, why not again place it in the line of experiment, and see how far it will prove profitable on the diluvial soils of the State. We know that this plant delights in the alluvial of our fresh water rivers, and it would naturally follow that it would thrive in that part of the State lying between the "Big Muddy" and Terre Haute and Alton Railroad, for nearly all of that section is covered with the alluvial deposit of the Missouri, the Mississippi, the Wabash, and of the Illinois rivers, the latter of which was, doubtless, at that time, the outlet to Lake Michigan. We know that it thrives well on the mountain limestone soils near Jonesboro', on the conglomerate sandstone

of the "Grand Chain," and that it has produced good crops as far north as Sangamon and Morgan counties, and promises to ripen well as far as Tazewell and Champaign.

As the State Agricultural Society has offered a premium of \$20 for the best quarter of an acre, it is probable that we shall have the question of its capability on our soils more fully tested. Should it prove profitable, it will require several years to place it among our staple crops, for it is a conceded feature in agricultural progress seldom excepted, that all valuable improvements, plants and new modes of culture are but slowly introduced, while some worthless humbug will sweep over the land like wild fire.

Gov. Yates on Agriculture.

Gov. Yates takes a deep interest in the agricultural progress of the State. He recommended that the fostering care of the State be extended to the State Agricultural Society. Here are his views :

THE ILLINOIS AGRICULTURAL SOCIETY.

The fostering hand of the Legislature should be continued in behalf of a society which observation and experience have shown to be one of the most effective agencies in developing the agricultural resources and the mechanical industry of the State. Especially should this be the case in a State whose chief interest is in the cultivation of the soil. Agriculture is freely regarded as the foundation of all other callings. When it prospers, all must prosper; when it fails, all must fail. It affords employment to near four-fifths of our population. It is the parent of commerce; it supplies its freights and exchanges; it builds and freights our railroads; it swells the sails of our ships on the ocean, sets the wheels of machinery in motion, reclaims the wilderness and pushes forward the car of settlement and civilization. He is certainly no statesman who does not study the interest and bearings of labor upon the body politic, and hold out to all reasonable stimulants, honors, and emoluments; and it is the object of this Society and its auxiliaries, to give greater profit and dignity to labor, to bring the agency of science and invention to its aid, to render the earth more productive, more beautiful and more convenient to man, to increase the revenue of the State itself, by enhancing the amount and revenue of its taxable property. It is eminently worthy of liberal encouragement. The officers of this Society for the past years of its existence are on its present board,

devotion in the discharge of their official duties, and are entitled to great credit for their magnanimous efforts to place Illinois in the front rank of all the agricultural States in the Union. The Society is now directing its attention to the establishment of an agricultural museum, and the Secretary is at this time visiting the several portions of the State collecting specimens of grains, coals, minerals, &c., ascertaining modes of cultivation, average yield, adaptation of soil, and other useful statistics, to be placed in enduring quarters at the capitol for the observation and improvement of all. The visitor at the late State Fair in Jacksonville could not fail to be impressed with the usefulness of this Association. He had before him evidence of the most gratifying advancement of the State in the superiority and variety of the products of the farm, the garden, the orchard and the dairy, in the improvement of stock, in the numberless models of machinery and labor saving implements adapted to almost every want of man, displaying ingenuity and skill highly creditable to the mechanical and inventive genius of the people, and showing how many minds are in ceaseless thought to promote the comfort of man.

SCIENTIFIC SURVEY.

A work has recently been inaugurated by the leading naturalists of the State, which, if prospered will doubtless prove of great advantage to the scientific survey now going on under the direction of the Illinois Natural History Society. Large collections in the various departments of Natural History have been already made within our State limits. These specimens are now being deposited and carefully arranged in the museum of the State Normal University, where they will serve for the purposes of education in that institution, and will also furnish, as the work goes on, new sources of useful knowledge to our citizens.

In addition to the above, we need a geological survey of the soil. It is well known that most of our prairie soil is what is called diluvial, that it is not constant in its character, but differs widely in different parts of the State, and not only so, but even in the same county, to map out and show the location of these various drifts and their practical adaption to practical products.

In 1842, the State was in debt some seventeen millions, with no money in the treasury, and Auditor's warrants worth only fifty cents on the dollar in a depreciated currency. The population was then only some 900,000, yet the indebtedness has been reduced to ten millions, and its population doubled since that time. This has not been made by commerce, by manufactures, or by agriculture to any great extent, but the most

sons and years were counted by lunar and solar indications. It is hard to prove this theory, though it is most likely true; and the conceded fact that time, excepting days only, was counted by the moon, by the antideluvian, renders it the more plausible.

If this theory is true, then in that age of the solar world, heat was always the same, in any given place, and the ever-varying moon which crossed the extremes of latitude, may have exercised a marked influence on vegetation. Indeed, such must have been the case; and the lunar influences on vegetation then may have been almost as manifest as solar influences, in warm climates, now. If now we suppose that a change in the direction of the poles of the earth caused the flood, and produced our seasons, we shall see how easy it was to substitute the sun for the moon, in measuring time, but to retain the belief in lunar influences, which were then most likely accounted for as ignorant people now account for charms.

From these premises it is obvious that, if the moon ruled then, the sun rules now; that if they were governed by the moon, we should be governed by the sun; and that when the proper season has arrived, when the air and soil are warm enough, and the soil is in good condition, as to moisture, pulverization and drainage, the time has come to plant or sow, and the moon is so far in the minority, at least, that it need not be noticed.—*Indiana Farmer.*

List of Illinois Nurseries.

We give below a list of our Illinois nurseries, so far as we can obtain them. We shall be pleased to make any correction or additions, as it is our purpose to make the list as complete as possible:

Babcock & Brother, Summerfield.
 Very Aldrich, Tiskilwa.
 I. C. Allen, Lena.
 H. N. Bliss, Buda.
 Arthur Bryant, Princeton.
 Samuel Brooks, Chicago.
 E. E. Bacon, Willow Creek.
 John B. Bubach, Princeton.
 Jabez Capps & Son, Mt. Pulaski.
 A. S. Coe, Port Byron.
 Colman & Drake, Bloomington.
 John A. Cook, Pavillion.
 Dent & Verner, Wenona.
 Robert Douglass, Waukegan.
 Michael Doyle, Springfield.
 M. L. Dunlap, Champaign.
 Samuel Edwards, Lamolille.
 Lewis Elsworth & Co., Napierville.
 Emmeret & Wuecler, Freeport.
 Isaac B. Essex, Drury.
 O. B. Galusha, Lisbon.
 John Garner, Nova.
 Dr. James H. Grain, Cain.
 Havens & Austin, Cass.
 William T. Henning, Polo.
 R. Herring, Durand.
 C. H. Hibbard, Marengo.

N. & C. G. Hotchkiss, Belvidere.
 J. Huggins, Woodburn.
 Charles Hamilton & Son, Ridgefield.
 A. Harbison, Mount Union.
 J. H. Hunter, Ashley.
 R. W. Hant & Co., Galesburg.
 Johnson & Clark, Brighton.
 Dr. J. A. Kennicott, West Northfield.
 D. F. Kinney, Rock Island.
 M. Myers, Magnolia.
 Huntington & Woodworth, Rockford.
 A. S. & George Barry, Alton.
 I. S. Knowlton, Byron.
 Charles Kennicott, Sandoval.
 M. G. Kern, Alton.
 J. L. Little, Dixon.
 Tyler McWhorter, Millersburg.
 Manly & Lowe, Marshall.
 Dr. I. D. Maxon, Henry.
 Otis Marble, Thompson's.
 S. G. Minkler, Specil Grove.
 Luman Montague, West Point.
 J. Moore, Diamond Lake.
 E. Ordway, Freeport.
 Overman & Mann, Bloomington.
 Thomas Payne, Fremont Centre.
 L. S. Pennington, Sterling.
 F. K. Phoenix, Bloomington.
 B. Pullen & Brother, Centralia.
 Rogers, Woodward & Glass, Marengo.
 A. Ross, Ottawa.
 Edgar Sanders, near Chicago.
 Henry Shaw, Tremont.
 J. S. Sherman, Rockford.
 E. H. Skinner, Marengo.
 H. Strickland, Roscoe.
 I. H. Stuart, Quincy.
 J. H. Tull & Son, two and a half miles from Pontosac.
 S. J. Wallace, Carthage.
 Adnah Williams, Galesburg.
 B. O. Curtis, Paris.
 Professor J. B. Turner, Jacksonville.
 James Rees, Ridge Farm, Vermillion county.
 Johnson & Clark, Brighton.
 Overman & Bushnell, Canton.
 Clem & Ten Brook, Paris.

We are aware that the list is very imperfect, yet here is enough to show that if people will look to their interest and buy at home, that they will have no need to risk long importations, besides paying exchange and freight.

Impositions.

The *Southern Homestead* says a French itinerant in that neighborhood sold bulbs of the squill for the magnificent *Brunsvigia Josephæ*, or *Josephine Lilly*; and roots of the *Columbine* or *Thalictrum*—a common weed—for the British *Queen Strawberry*. Served them right—ignorance of a strawberry plant in a purchaser is inexcusable. We know a party who "would not be humbugged" by a respectable Philadelphia seedsman two years ago, by "paying two dollars for a small Rebecca grape," and so went

to the market and bought "a fine four year old" plant for 37 cents. Now, that his "Rebecca" has proved to be a "fox," he complains bitterly of the "frauds of a nurseryman."

MORAL.—Read the papers; you will not then buy weeds for strawberry plants, or four year old vines, from one but two years introduced.—*Gardener's Monthly.*

Packing Strawberry Plants.

A great many strawberry plants are yearly destroyed whilst being forwarded from one place to the other, through improper package. A few hints, therefore, as to the best method of preparing them to be sent a long distance, may be of service to those who wish to forward plants to their friends in other places, and who have had no experience to direct them therein.

Prepare a pail full of thin mud, if of a clayey nature, so much the better. Take up the plants carefully with a trowel or small spade, so that the roots may be preserved as entire as possible, and as soon as taken up, dip the roots in the prepared mud, so that they (the roots) become entirely covered with it. Each plant, in succession, must be treated in like manner, and the one laid upon the other, root upon root, until a dozen are thus coated. They are then tied into bundles with strips of cotton cloth and the roots packed in moss. If a large quantity of plants is to be sent off, the bundles should be packed side by side in shallow wooden boxes, into the lids of which small holes have been made, or the plants may be packed into the boxes, crowns uppermost, without being tied.

Before planting, the roots should be separated again, to restore them, as nearly as possible, to the same position they were when taken up.

It is a good plan to treat all strawberries to such a coating of mud, when taken up, even if they are but to be removed for an hour. Their growth is then but very little checked.—*Exchange.*

We would add to the above: surround the plants with a large body of clay, instead of the moss, and on planting, set the ball in a dish of water, when it will dissolve, and the plants will separate. ED.

Items for the Housewife.

In the last annual report of Secretary Flint, of the Massachusetts Board of Agriculture, we find, subjoined to an article upon Indian corn, the following remark, which, with such of the recipes as we extract, we commend to the attention of those who, just because the use of corn meal is familiar, and the food manufactured from it so common, are accustomed to think the mode of its preparation of very little consequence. He says:

The details of cooking the indefinite variety of delicious dishes which may be made of good Indian corn meal, are already too familiar, perhaps, to need repetition, but as an example a few of these recipes may be stated as follows:

HASTY PUDDING.—The simplest and most common way of cooking corn meal, is to put two quarts of water into a clean pot or sauce pan, set it over the fire, adding a teaspoon of salt, and when it begins to boil, stir in a lump of fresh butter, say about two ounces, then add (a handful at a time) sufficient Indian meal to make it very thick, stirring it all the time with a mush-stick. Keep it boiling well, and continue to throw in meal till it is so thick that the stick or paddle stands upright in it. Then send it to the table hot, and eat it with milk, cream or molasses and butter. What is left may be cut into slices and fried for breakfast next day.

NICE JOHNNY-CAKE.—Sift a quart of Indian meal into a pan, rub two table-spoonfulls of butter into it, add a small tea-cup of molasses, and a teaspoonful of ground sugar, and pour on by degrees sufficient warm water to make a moderately soft dough; it may be stirred very hard; then grease with fresh butter, small tin pans about 2½ inches in diameter, and ¾ of an inch deep, fill them with the dough and bake with a strong fire. They must be well baked, taking care that the surface does not burn while the inside is soft and raw.

CORN BREAD.—Rub a piece of butter the size of an egg into a pint of corn meal, make it a batter with two eggs and some new milk and a spoonful of yeast, and set it by the fire an hour to rise; butter little pans as above, and bake it in an oven with a quick heat.

CORN BATTER BREAD.—Take six tablespoonfuls of flour and three of corn meal, with a little salt, sift them and make a thin batter with four eggs and a sufficient quantity of milk, bake in small pans in a quick oven.

INDIAN CORN BISCUIT.—Sift a quart of corn meal and a pint of wheat flour into a pan with a teaspoonful of salt and three pints of milk, mix them well, beat the whites of four eggs and the yolks separately in two pans; the yolks must be beat until very thick and smooth, the whites to stiff froth that will stand alone by itself, then stir the yolk a little at a time into the milk; butter a sufficient number of cups or small deep pans, nearly fill them with the batter, set them immediately into a hot oven and bake them fast; turn them out of the cups and send them warm to the table, pull them open and eat them with butter. They will puff up finely if at the last you stir in a teaspoonful of soda, dissolved in a little warm water.

FARMERS' CORN PUDDING.—Set on the fire a large pot of water, which must boil hard by the time the pudding is mixed. Put one quart of milk by itself into a sauce pan, and give it a boil; when it has come to a boil, pour it into a deep pan, and stir into it a pint of molasses, then add by degrees three pints of Indian meal, and lastly a teaspoonful of ground cinnamon or ginger; have ready a pudding bag, dip it into boiling water, shake it out, then pour the water into the bag, tie firmly, leaving about one-third vacant, as it requires room to swell; put the bag into the large pot of boiling water, cover it close-

ly, and let it boil steadily for at least three hours, four will not be too long. While boiling it should be turned frequently; as the water boils away, replenish it with more water kept boiling in another kettle; on no account put in cold water, as that will render the pudding heavy. Turn it out of the bag immediately before it goes to the table, and eat with butter and molasses. It will be found excellent.

BAKED CORN PUDDING—To one teacupful of corn meal add one quart of milk, three eggs and a little ginger. Bake one hour.

RYE AND INDIAN GRIDDLE CAKES.—Take one cupful of corn meal, two cups of rye flour, one egg, a little salt, and three spoonfuls of soda and cream of tartar, one of soda and two of tartar, make a batter the same as for buckwheat cakes, and bake on a griddle.

Trapping a Tiger.

A still more ingenious mode of tiger killing is that which is employed by the natives of Oude. They gather a number of the broad leaves of the praus tree, which much resembles the sycamore, and having well besmeared them with a kind of birdlime, they strew them in the animal's way, taking care to lay them with the prepared side uppermost. Let a tiger but put his paw on one of these innocent-looking leaves and his fate is settled. Finding the leaf stick to his paw, he shakes it in order to rid himself of the nuisance, and finding that plan unsuccessful, he endeavors to attain his object by rubbing it against his face, thereby smearing the ropy birdlime over his nose and eyes, and gluing the eyelids together. By this time he has probably trodden on several more of the treacherous leaves, and is bewildered with the novel inconvenienc; then he rolls on the ground, and rubs his head and face on the earth, in his efforts to get free. By so doing, he only adds fresh birdlime to his head body and limbs, agglutinates his sleek fur together in unsightly tufts, and finishes by hoodwinking himself so thoroughly with leaves and birdlime that he lies floundering on the ground, tearing up the earth with his claws, uttering howls of rage and dismay, and exhausted by the impotent struggles in which he has been so long engaged. These cries are a signal to the authors of his misery, who run to the spot, armed with guns, bows, and spears, and find no difficulty in dispatching their blind and wearied foe.—*Routledge's Illustrated Natural History.*

Perverted Taste.

Von Troil informs us that the Icelanders, when there is a scarcity of fodder, feed their cattle with sternbitr, (a kind of fish), which, together with the heads and bones of cod, is beaten small and mixed with one quarter of chopped hay. He adds that the cattle are fond of this food, and yield a good deal of milk after having used it. For a similar reason, says Prof. Barton, deer have been frequently known to feed on dead fish that are washed up on the banks of the Susquehannah and other rivers. Spallanzani tells us

by dint of hunger he brought a wood pigeon to relish flesh so well that it refused every other kind of sustenance, even grain, of which it is naturally so greedy. Certain other animals are likewise capable, not only of changing their accustomed diet, but sometimes acquire so vitiated a taste as to refuse their former food. Man is the most easily perverted in taste. There is scarcely anything digestible but he can learn to relish. This capacity enables him to obtain a subsistence in every region of earth; and permits him to inflict upon himself a host of bad habits.—*College Journal.*

Orchard Ladders.

There has been a very good form of orchard ladder figured in the *Maine Farmer*, and we have seen and used another form, which is very good. The *Maine Farmer's* is made thus: a ring of iron is sipped down on the small end of a spruce pole of a suitable length and strength. Then split the pole up from the butt to the ring, and insert the rounds as usual. The advantage of this arrangement is, that the pole end may be thrust up into, and lie securely in the crotches of trees, and be moved about among the limbs with much greater ease than an ordinary ladder.

The other kind mentioned is a common ladder with an attachment to the upper end, after this fashion: two rings or bands of iron are upon the ends of the ladder poles, on one side short, stout spikes project from each ring, from the other side, rods of five-eighths iron go from the tops of the poles and uniting a little above the ladder, form a single hook, the point of which is turned outward and sharpened. The objects of the two points on the one side is to prevent the ladder slipping when placed against a large limb or side of a building. The hook on the other side supports the ladder in crotches or small limbs which it hooks over, and the point enables it to hold upon small stems or upright branches. This is certainly the most secure ladder we have ever used.

Now, a combination of the two forms can be very easily made, and, for aught we can see, it would be an improvement upon either. Attach to the top of the pole of the ladder first described a strong hook with a sharp pointed end turned outward. This should be attached by a ring and firmly wedged on, so that it could not turn. If this is done, we cannot see but that all the advantages of both ladders would be compassed. One further improvement. We shall make just such a ladder at once, and besides, bore a hole just above the ring, say eighteen inches above the top of the pole, and insert a stout ash pin, projecting on the side opposite the hook, and at right angles to the breadth of the ladder, as a top step.

If anybody will suggest a more convenient form of orchard ladder, we should be glad to hear from him before ours is done.—*Homestead.*

Quackery and Science in Bread Making.

The world is full of observers and collectors of facts, and has a goodly number of theorizers from the same, but in putting our acquirements to the

proof of practice, there seems to be some great difficulty. The head to think and the hand to do are rarely found together. To illustrate: The chemistry of bread making is incontestably (?) well understood in scientific circles, but can we say that chemistry has taught us to make good bread? The venders of "dietetic saleratus," "chemical ditto," "concentrated leaven," "yeast powders," &c., &c., shout, "Yes, yes," on every hand, "we've got the 'article' to raise bread with—powerful for good and impotent for evil as three weeks' use and a chemical warrant testify." But good bread is scarce still, and perhaps is growing scarcer. About fermentation—an old crow knows that sprouted corn is sweetest, and its young get uncommonly fat upon it—give us fermentation so far, then, O bread-makers, as to make sugar of a portion of the starch. But we men don't know how to make bread with all our science, and it is a dangerous thing to attempt capsizing the old-fashioned bread-bowl, where a quarter of the flour, or a baking of bread is rotting in a "sponge" preparatory to getting a good "rise," until we are sure of a better substitute. Do, Mr. Chemist, try to bake a barrel of flour into bread by the light of science. If you would go that far in the business yourself, or with some tractable cook to assist you, there is hope that you might give us some reasonably accurate rules for making bread. There is a wide space in this common, every day matter, as in many others, between the thinker and the worker—space, but not a vacuum—for it is filled with charlatans and their nostrums.—*Home-stead.*

Agricultural Journals of the United States.

The New Jersey Farmer, now in its fifth volume, is published in Trenton, by L. Naar, editor and proprietor, at \$1 a year; thirty-two pages octavo; agriculture and horticulture.

The Gardner's Monthly, octavo, forty-eight pages, a popular journal, chiefly devoted to horticulture, is now in its second volume. We hope for it a long life of usefulness. Edited by Thos. Meehan, Philadelphia; \$1 a year.

Farmer and Gardner, Philadelphia; octavo, thirty-two pages, agricultural and horticultural; \$1 a year. A. M. Spangler, editor and proprietor—is in its second volume.

The Germantown (Penn.) Telegraph is an old established miscellaneous paper, with an agricultural department—a weekly quarto, \$2 a year. P. R. Freas, editor and proprietor.

National Agriculturist, Pittsburg, Pennsylvania, in its third volume, is an eight page quarto, published monthly at \$1 a year, by J. T. F. Wright, editor and proprietor; devoted principally to agriculture, but in part to general miscellany.

The Ohio Farmer, Cleveland. Weekly, \$2 a year; a handsome quarto, filled with miscellaneous and agricultural matter, suited to an enlightened farmer's family; now in its ninth year. Thomas Brown, editor and proprietor.

The House and Garden is published monthly at Cleveland, at 50 cents a year, by Thomas Brown, editor and proprietor; sixteen pages; devoted to agricultural and household affairs.

The Wool Grower is a monthly quarto devoted to the interest of wool-growers, stock matters, and miscellany. It purports to be published at Cleveland, O., at 50 cents a year, without editor or publisher being named.

Ohio Cultivator, Columbus, semi-monthly, is in its sixteenth volume, at \$1 a year; is a large octavo, 16 pages, devoted to agriculture, horticulture and stock. Col. S. D. Harris, editor and proprietor.

Ohio Valley Farmer, Cincinnati, a monthly quarto, 16 pages, now volume six \$1 a year; agricultural and horticultural. Published by B. F. Sandford.

The Cincinnati Farmer, Cincinnati, Ohio, a monthly octavo, 48 pages; neatly got up pamphlet, published in covers, at \$2 a year, edited by A. G. Carey, proprietor, is now in its fifth volume. It is agricultural and horticultural, and prints the proceedings of the Cincinnati Horticultural Society.

Indiana Farmer, J. N. Ray editor and proprietor, Indianapolis, semi-monthly, 16 pages quarto, \$1 a year, is now in its ninth volume, and though called the *Indiana Farmer*, is filled with such matter as is equally well adapted to farming in the adjoining States.

Michigan Farmer, Detroit, an old established weekly quarto, eight pages, \$2 a year, R. F. Johnson, editor and publisher, is mainly devoted to agriculture and kindred subjects.

Wisconsin Farmer, Madison, D. J. Powers & Co., publishers, 32 pages octavo, \$1 a year; agricultural and horticultural; adapted to the wants of the Northwest.

Prairie Farmer, Chicago, Illinois; Emery & Co., publishers; a well printed quarto of sixteen pages, weekly, at \$2 a year; making agriculture its leading feature, with horticulture and family miscellany. This paper dates back over twenty years. It was established by John S. Wright, and has always been conducted with such ability as to make it particularly valuable to all Western farmer.

Farmer's Advocate, Chicago, J. Bonham editor and proprietor; a weekly quarto, 16 pages, \$1.50 a year—an offshoot of the *Prairie Farmer*, of some three years' standing.

Illinois Farmer, Springfield; Bailhache & Baker, publishers; M. L. Dunlap, editor; monthly octavo, 32 pages, \$1 a year, in its sixth volume, is mainly agricultural, and especially devoted to the interest of the Illinois farmer.

Iowa Farmer. There was, perhaps is, an *Iowa Farmer*, edited by Wm. Duane Wilson.

Nebraska Farmer, Brownsville, volume one, monthly octavo, 16 pages, agricultural and horticultural; \$1 a year, R. N. Farnas, publisher.

Valley Farmer, Norman J. Coleman, editor and publisher, St. Louis; A. Gunter, publisher, Louisville; H. P. Byam, traveling editor; octavo, 32 pages, \$1 a year; a monthly agricultural journal, designed to benefit the planter, farmer, gardener, fruit grower and stock raiser. It is a covered pamphlet, handsomely printed, and in matter well worthy of the patronage of those it is intended to benefit.

The Minnesota Farmer and Gardner, published at St. Paul, monthly, in octavo form, 32 pages,

L. M. Ford & Co., publishers. Volume one looks well. Price, \$1 a year.

Oregon Farmer, Portland, A. G. Walling editor, semi-monthly, quarto, 8 pages, \$2 50 a year; now in its third volume of agricultural, horticultural and miscellaneous matter, suited to that State.

California Farmer, San Francisco; eight well printed pages quarto, weekly, at \$5 a year. An agricultural and miscellaneous journal, largely patronized by advertisers. Edited and published by Col. Warren. It is now in its fourteenth volume, and is doubtless found valuable to the agricultural community of the gold-digging State.

California Cultivist, San Francisco; Wadsworth & Flint, editors and proprietors; a monthly octavo of 48 pages, at \$4 a year, devoted to agriculture and horticulture, in its third volume.

The American Farmer, published over forty years ago at Baltimore, is a monthly octavo of 32 pages, at \$1 a year, by Worthington & Lewis, successors to Samuel Sands, who succeeded John S. Skinner. This has always been a well conducted, popular paper, the contents never belying its name, though somewhat more devoted to Southern than Northern farming.

The Rural Register, Baltimore, Md., quarto, 16 pages, in three columns, exclusive of advertisements, by Samuel Sands, who was publisher of the *American Farmer* for a long time, and S. Sands Mills. This paper is now in its second volume, and well filled with matter as well suited to Northern farmers as Southern planters. Monthly, \$1 a year.

Southern Planter, a small-sized octavo, 64 pages, published monthly at Richmond Va., by Augustus Williams, at \$2 a year; maintains a popularity established twenty years ago.

North Carolina Planter, published monthly at Raleigh, by A. W. Gorman, at \$2 a year, octavo, of 32 pages. This, as its name indicates, is local in its character, and as such, entitled to patronage. It is now in its third volume.

The Edgecombe Farm Journal is published at Tarboro, N. C., in one of the most enterprising, improving section of the State. It is now in its first volume; it is a well printed quarto, 8 pages, monthly; 50 cents a year; Wm. B. Smith & Co., editors and proprietors, who certainly give their subscribers, (we hope they are numerous) the value of their money.

Farmer and Planter, Columbia, S. C.; R. M. Stokes, proprietor, Col. Sumner, editor; octavo, 32 pages, covered, monthly, \$1 a year; particularly adapted to Southern agriculture, and valuable for all planters. It has been published 11 years, but has never received the patronage it merits.

The Southern Cultivator, a large octavo of 32 pages, is published monthly by W. S. Jones, at Augusta, Ga., at \$1 a year; was formerly edited by Dr. Lee, and now by the publisher and Mr. Redmond. It is Southern in its character, and justly popular there.

Southern Field and Fireside, published weekly at Augusta, by J. Gardner, at \$2 a year, is partly agricultural and partly miscellaneous, a quarto, now in its second volume.

American Cotton Planter, Montgomery, Ala., a monthly octavo of 48 pages. A Southern

journal of agriculture at \$1 a year, by Dr. Cloud, editor and proprietor.

Southern Rural Gentleman, Grenada, Miss., a quarto weekly, \$2 50 a year, J. L. Davis, proprietor, is now in its third volume, and is made up of agricultural and miscellaneous matter suited to that region.

Canadian Agriculturist, Toronto, appears to be published by the Board of Agriculture, and contains its transactions and other agricultural matter, principally Canadian. It is issued semi-monthly, 32 octavo pages, at 50 cents a year.

There has been, and may be now, one or two other agricultural papers published in Canada. There may be, also, others that we have not named in the United States, which we shall be glad to add to the list, when assured of their existence. The New York Agricultural Society issues a monthly bulletin, and so does, or did, the National Agricultural Society. Each one of the State Agricultural Societies publish annual volumes of their transactions. The American Institute, New York, also publishes an annual volume. The weekly proceedings of the Farmer's Club attached to the Institute are published in the *Semi-Weekly Tribune*.

Corn-cob Meal, and its Injurious Effect on Animals.

The time was—nor but a few years since—when corn-cobs were thought to be very valuable for feeding stock, and some agricultural writers placed such a high estimate upon them, that they pronounced cobs “almost equal in value to the corn that grows on them.” But common sense, reason, and experience all teach us that they are good for just nothing at all, for feeding any kind of stock. When the Creator first made Indian corn, he never designed the cobs for food, and the experience of every thorough and observing farmer goes to corroborate the fact, that instead of being an article of food, possessing a very small amount of nutriment and palatability, they are a decided injury to any animal that takes them into its stomach. Now, if any mortal is so self-willed or incredulous as not to credit this statement, I will only ask him to eat mush, or corn bread, or Johnny-cake, for a few meals, made of corn-cob meal; and if it don't make him purr, and groan to be delivered from corn-cobs for food, we will set him down as having a digestive apparatus equal to a shark. Ground into meal, or whole, they are no more fit for food than ground bones, or horn piths, or the stems of squashes. They are as insipid as they are innutritious, and do not possess half the value of good saw dust; for saw dust of good wood will nourish an animal, and will not injure its intestines mechanically. But corn-cobs, whether ground or whole, will injure its intestines; and if fed in large quantities will cause death. In good saw dust, beside some potash and woody fibre, there is more or less sugar, gum and starch, which will nourish the animal system; but in corn-cobs we find not a single particle of sugar, gum nor starch, the principal constituents being potash and woody fibre, which afford no nourishment. Feed it to animals which are being fattened, and instead of

licking it down as if they liked it, after eating a mouthful or two, they will look up and say, in the language of one of my little nephews, when he had eaten so much that his stomach loathed it: "Mr, I don't like your pie." There can be nothing said in favor of cob meal as food, only that it distends the stomach.

Just take a piece of corn-cob and examine it closely, by cutting it to small, thin pieces with a knife, and you will find small thin, plates, or scales of silicate of potash, which the mill-stones will not grind, unless they are very sharp, and which are almost as hard and sharp on their edges as pieces of glass. When cob meal is fed to fowls of any kind, they will reject or "spit out" all these flint-like pieces, unless they are very hungry. Horses or oxen do not like it, and they only eat it for the sake of the corn meal. These thin, hard plates will not digest in their stomachs, and unless their bowels are very loose, when these substances are passing in the odure, through the rectum of the animal, they scratch it, and cut it to such an extent as to cause derangement of the animal system, and even death.

"But," says Mr. Objector, "how do you know all this?" When a person dies suddenly, and arsenic is found in his stomach, how do we know that his death was caused by poisoning? When a dog is fed a ball of dough filled with glass, pounded fine, and he dies suddenly, and we find upon examination, that his intestines are all cut through, how do we know that the glass killed him? So, when animals that have been accustomed to eat cob meal, lie down and die unexpectedly, and we find their intestines all cut through in places, what good reason have we for thinking that cob meal caused their death?

A few years ago, a neighbor of mine who was accustomed to feed much meal of corn ground in the ear, told me that one of his fat oxen seemed ill, and would not eat well, and he discovered that "every time he voided excrement, it would be covered in places with blood." He omitted cob meal and the ox soon recovered. Of course, he immediately abandoned the feeding of cob meal. In another part of this county a farmer was fattening a yoke of good oxen, by feeding them the meal of Indian corn, ground in the ear; they were fed about a half bushel per day apiece. One was taken ill very suddenly, and refused to eat, and before the cause could be determined, he was dead. A post mortem examination disclosed to the owner that the rectum of the ox was scratched and cut through in places, by the hard scales found in the corn cob, and had become so much inflamed as to prevent the passage of the odure. In a few days the other ox was affected in the same manner, and died in the same way as the first one. A post mortem examination disclosed the same appearances which were brought to light in the examination of the first one. The verdict was, that the death of the oxen was caused by the mechanical action of the hard substances—thin plates—which are found in corn-cobs, which wounded the rectum as they were passing through it, thus producing inflammation, and stopping the passage of the odure. A near neighbor of mine lost a very valuable horse, which died very suddenly. I inquired if

they were able to satisfy their minds as to the cause of his death? I was told that after a post mortem examination, the unanimous decision was, that "his death was caused by the mechanical injury which his intestines received from eating meal of corn ground in the ear."

Now, these are facts which cannot be refuted, and I have received them, not tenth handed, but from the mouths of the owners of the animals alluded to. My own experience is decidedly against feeding corn-cobs in any form, or to any animals, and I do not know of a good farmer in this region who does not coincide with me on this subject, although most of us were formerly accustomed to feed corn-cob meal. The cobs of old corn are very much worse than those of new corn, because the little, hard scales in the cobs of the new are not so hard as they become after being dried for six or ten months.

My own practice with corn-cobs has been, for a number of years, to put them around small fruit trees, or on knolls in my fields, where the soil is of a stubborn character, and rather thin. Many farmers cast them into the highway, or in some other place where they are in the way, or where they do not benefit the farm. But they are an excellent material for mulching young trees, and the more we can get on, or mingle would be inconvenient to "wait a little longer."

When the manure and frame are both fixed, a half inch of soil should be thrown over the manure under the sash to absorb the gross gases that would else be too strong. For a few days after, the heat will be too violent, but when the thermometer indicates a temperature of 90°, operations may begin; but the usual aim is 70°. When the bed shows signs of getting below this, linings of stable manure must be applied round the frames, one and a half feet thick, and if boards, shutters, mats, or any similar material can be spread over these linings, the heat will be maintained much longer.

Having secured the hot-bed, dahlias, annuals, cucumbers, tomatoes, peppers, egg-plants, and other interesting things can be started, by which we can get several weeks ahead of our neighbors in the enjoyment of vegetable luxuries, and when done with the bed in May, it will be the very place for gloxinias achimenes, and many other beautiful house plants which delight in a warm, moist heat.

Guess.

I love a maid, a mystic maid,
Whose form no eyes but mine can see;
She comes in light, she comes in shade,
And beautiful in both is she.
He shape in dreams I oft behold,
And oft she whispers in my ear
Such words as, when to others told,
Awake the sigh or wring the tear:
Then guess, guess, who she,
The lady of my love may be.

I find the lustre of her brow
Come o'er me in my darkest ways;
And feel as if her voice, e'en now,
Were echoing far off my lays,
There is no scene of joy or woe,
But she doth gild with influence bright;
And shed o'er all so rich a glow,
As makes e'en tears seem full of light:
Then guess, guess, who she,
The lady of my love may be.

Culture of Flax.

TUSCOLA, January 28, 1861.

EDITOR ILLINOIS FARMER—*Dear Sir*: I wish to sow one or two hundred acres of flax, with a view to make money out of the seed. Can you inform me of parties who would contract for the crop? What can I do with the lint? Any information that you can give will be duly appreciated.

R.

Flax must be sown on clean land, deeply plowed, in the spring, and sown as fast as the land is plowed. It can be sown from the middle of March to the middle of May. The ground must be in fine tilth, and to this end we would first harrow thoroughly, roll and sow, harrow in the seed, and again roll. This will give a good, smooth well pulverized surface, on which the seed is early sown, half a bushel per acre. Sometimes it is sown on prairie sod, broken up in May. This will do very well if the prairie has been pastured for some years, otherwise we would not commend this practice. When flax is sown for the seed, the lint is of little value, as the staple is short and branching. It is cut with the common reaper, which makes it still shorter. Near Chicago, the flax straw, after passing through the threshing machine or otherwise divested of its seed, is sold at two to three dollars per ton on the farm. This is worked up into tow for the city upholsters, who pay for it one and a half cents a pound. A ton makes about six hundred pounds of the tow. The machinery to make tow costs about six hundred dollars, and will make up about two tons a day of the straw. The labor is dirty and unhealthy, and but few will engage in it—the profits are not large. On good, well cultivated land, the crop will average about twelve bushels to the acre—the average price may be set at ninety cents. In thrashing, a large quantity of the balls break off, and have to be again subject to the flail or the roller, so as to crush out the seed. But few machines will thrash flax, as it winds about the cylinder. Unless some process can be devised

to use the lint to advantage, we do not think flax will pay as good an average as most other farm crops. The straw is only of value near cities and paper mills, for the tow will not bear much of a freight bill at present prices. We have had some experience in flax culture; when we could not save the straw it was a losing business, and with the straw, no better than spring wheat at seventy-five cents a bushel, and when we were within two miles of the oil mill that paid Chicago prices for the seed. There is this advantage in the culture of flax, it is an excellent crop to prepare for wheat whether spring or winter. We have no idea that flax will ever supercede the use of cotton to any great extent in textile fabrics, and we believe the idea of spinning it on cotton machinery has been given up by practical men. It may do for politicians to harp on, but the prospect of success becomes as far in the dim distance, or even more so than when Clausen startled the world with his flax-cotton theory. We have greater faith in the acclimation of the cotton plant than to reduce the flax to the condition of cotton. We would not discourage the culture of flax for seed and for tow, for both are needed, but at the same time, we would not recommend its culture a hundred and fifty miles from the oil mill, for the freight would cut out the profit. Flax seed is a bad article to ship in sacks, as they must be not only strong, but tight; to be safe, two sacks should be used, one in which the seed is put, and the other over it, in the same manner that coffee is shipped; this will insure safety, otherwise there might be a large loss, as from the oily nature of the seed, it will pass out of a very small rent in the sack.

Sweet Potatoes.

This is a very desirable vegetable, second only to the Irish potato and the cabbage, and it certainly should be more generally planted. We have not failed of a fair crop

for the past dozen years. Our main crop for market last season was planted too late, and we had but few good ones, but the few that we set in May did well.

Josiah Smith, of Lockport, Will county, we believe, was the first person who attempted their culture for market in the north part of the State, and from him, in 1857, we obtained our first plants. Mr. Smith did not find it very profitable, from the fact that he often planted the large kinds that he obtained from St. Louis and further south. In the first place he planted too early, but he soon learned that he must wait until the ground became warm. In a letter from him dated January 24, 1849, he says, "To-day I have sent you five hundred plants per express. I have now planted one and a half acres, and have three and a half more to plant. I sell plants at thirty-seven and a half cents per hundred, and so soon as I keep over my own seed, will sell at twenty-five cents, but the demand is fully up to the supply, if not ahead of it, as the price has not been materially reduced. They are so easily grown that they should be found in every garden, whether of the farm or village.

It has been the practice of sweet potatoe men to put up the small tubers for seed, but from a pretty thorough trial we are satisfied that this is a bad practice, as the well matured potatoes produce the most and strongest plants. Mr. Tenbrook, of Rockville, Indiana, is the first man that we know who has for several years been in the practice of putting up large and ripened tubers. Mr. T. publishes a hand book on the culture of this plant, which can be had of any person who purchases of him to sprout; its cost is twenty-five cents. Next month we shall have more to say on this subject.

Why should they be quarreling at Washington about Territories to be acquired fifty or a hundred years hence? Why break up the Union because we can't settle questions that will belong to future generations?

List of Premiums.

The following is the official List of Premiums awarded by the Executive Committee of the Illinois State Agricultural Society, at their regular meeting, commencing January 9th, 1861, at the Agricultural Rooms, Springfield, Illinois.

JOHN P. REYNODDS,
Corresponding Secretary.

Essays.

- Best approved essay on the breeding, rearing and management of Horses in Illinois, Dudley Willits, New Boston, Illinois.....\$10
- Best approved essay on Insects injurious to vegetation in Illinois, with suggestions as to the best means for their destruction, B. D. Walsh, Rock Island. 25

Miscellaneous.

- Essay on the Culture of Flowers, Mrs. John R. Woods, Upper Alton, Illinois..... 10
- NOTE.—Other essays received too late for competition, by consent of the authors, will be published in the "Transactions."

Field Crops.

- For the best field of Wheat, not less than five acres, the "Manny Prize" of Combined Reaper and Mower, value \$145. Awarded to Hugh Huls, St. Charles, Illinois. Yield per acre, 38½ bushels: the best entered, but not an extraordinary yield for the last season.
- Best crop of Fall Wheat, yield 25 bushels 5 pounds per acre, to Matthew McClurkin, Sparta, Randolph county..... 15
- Best crop Spring Wheat, not less than five acres, nor less than thirty bushels per acre, to Henry L. Boies, Sycamore, DeKalb county..... 25
- 2d best, yield 28 bushels 13 pounds, per acre, to John Mahard, Carter, Sangamon county..... 10
- Best crop of Indian Corn and not less than five acres, nor less than 120 bushels per acre, to Caleb Letton, Jacksonville, Morgan county, yield 127 bushels 35 pounds per acre..... 50
- 2d best to Jno. A. Gallemore, Lima, Adams county, yield per acre 110 bushels 23 pounds, quality, as per sample, superior..... 25
- 3d best, to Hugh Huls, St. Charles, Illinois, yield 112 bushels per acre, quality not so good as that of Mr. Gallemore..... 15
- 4th best, to Hugh Easdale, Sparta, Randolph county, yield 57½ bushels per acre..... 10
- Best crop of Oats, not less than five acres nor less than 80 bushels per acre, Hugh Huls, St. Charles, Illinois, yield per acre 80 bushels 5 pounds..... 25
- Best crop of Potatoes, not less than half acre, to O. Barnard, Bloomington, yield 168 bushels to half acre..... 10
- 2d best, yield per half acre 108 bushels, to John A. Gallemore, Lima, Adams county..... 5
- Best crop Sweet Potatoes, not less than quarter acre, to William Robertson, Sparta, Randolph county, yield per acre 51½ bushels..... 10
- 2d best, yield per quarter acre 46 bushels, to John A. Gallemore, Lima, Adams county.....
- Best crop of Onions, not less than quarter acre, to S. Wilber, Momence, Kankakee county, yield to quarter acre 172 bushels..... 10
- Best acre of Flax Seed, to Hugh Easdale, Sparta, Randolph county, yield, on four acres, three roods and eight rods, 85 bushels 7 pounds..... 10

Best acre of Clover Seed, to Hugh Huis, St. Charles, yield per acre 5 bushels.....	10
Best acre Castor Beans, to Hugh Easdale, Sparta, Randolph county.....	10
2d best acre Buckwheat, to Hugh Huis, St. Charles, yield 20 bushels per acre	5
Best gallon Syrup made from African or Chinese sugar cane, to Samul Murray, Murraysville, Morgan county.....	15

Farms, Nurseries, Orchards, Groves and Draining.

For the best improved and highly cultivated farm, not less than 500 acres—First premium to Lewis W. Owen, Rockford, Winnebago county.....	25
Second premium to Josiah Williams, Geneva, Scott county.....	15
Best ditto, not less than 160 acres—First premium to W. P. West, Geneva, Kane county.....	15
Best ditto, not less than 80 acres—First premium to S. B. Turner, Quincy, Adams county.....	25
Second premium not awarded.	
Best improved and cultivated Farm, not less than 40 acres—First premium to K. K. Jones, Quincy, Adams county.....	25
No second premium awarded.	
Best ditto, not less than 20 acres—First premium to Chas. E. Peck, Winetka, Cook county.....	25
Second premium to O. Barnard, Bloomington, McLean county.....	15
Best transplanted Forest Trees, not less than six feet high, for permanent growth, and covering not less than one acre of ground—First premium to John A. Kennicott, West Northfield, Cook county.....	10
Best arranged and cultivated Nursery of Fruit Trees and Fruit Shrubs—First premium to M. L. Dunlap, Champaign county.....	20
Second premium, Lewis Ellsworth & Co., DuPage county.....	10
Same of Grafted Apple Trees, one to four years old—First premium to Lewis Ellsworth & Co..	20
Second premium to M. L. Dunlap	10
Same of Grafted Apples, one to three years old—First premium to Overman & Mann, Bloomington.....	20
Second premium to Lewis Ellsworth & Co.....	10
Same of one and two year old Grafted or Budded Apple Trees—First premium to J. H. Stewart, Quincy, Adams county.....	10
Second premium to S. G. Minkler, Specie Grove, Kendall county.....	5
Best show of one year old Budded or Grafted Apple Trees—First premium to J. H. Stewart, Quincy.....	10
Second premium to Charles Kennicott, Sandoval..	5
Best Apple Orchard in bearing, not less than 100 trees, etc.—First premium to S. G. Minkler, Specie Grove, Kendall county.....	25
Second premium to Clark Chatten, Quincy.....	15
Same not less than 500 trees—First premium to Clark Chatten, Quincy.....	25
No second premium awarded.	
Best Peach Orchard, not less than 100 trees in bearing—First premium to Clark Chatten, Quincy.....	25
No second premium awarded.	
Same not less than 500 trees—First premium to Clark Chatten, Quincy.....	25
Best experiment of underdraining during the year, not less than 10 acres—First premium to H. M. Kidder, of Evanston, Cook county.....	40
No second premium awarded.	
<i>Awarding Committee.</i> —Chas. D. Bragdon Ebenezer Seeley.	

Miscellaneous.

CLASS D.

Lot of Fat Hogs, by P. F. Fletcher, Auburn, Sangamon county, Ill.....	20
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CLASS F.

Combined Plow, Cultivator and Corn Planter, by J. B. Turner, Jacksonville.....	20
Machine for Cutting Corn, by John H. Harrison, Salisbury, Sangamon county, Ill.....	Recommended.
Apple Parer by Levi Hungerford, Cordova, Rock Island county.....	Recommended.
Hand Corn Sheller by A. Adams & Co., Sandwich, DeKalb county.....	Highly recommended.
Portable Cider Mill by L. H. Case, Pekin, Tazewell county.....	Commended.
Combined Corn Sheller, Cider Mill and fixture, by James Townsend, Cincinnati, Ohio.	
Commended as a good Combined Machine.	
Mormon Beater Hay Press, by L. C. Field, Yatesburg, Ill.....	Recommended.
Grain Binder, by W. W. Burson, Yates City, Knox county, Ill.....	Recommended.
Granular Fuel Machine, by J. J. Wilson, Newark, Kendall county, Ill.....	High commendation.
Double Seamer for Tinner's use, by E. D. Way, Kewanee, Henry county, Ill.....	Commended.
Cook's Portable Sugar Evaporator, by Blymer, Bates & Co., Mansfield, Ohio.	
The Executive Committee, from personal observation, highly commended this Evaporator.	
Ayer's Patent Water Elevator and Wind Mill, by L. Morton, Hartford, Conn.....	Commended.
Display of Portable Drop Lever, Warehouse, Union, Grocer's Scales, Post Office Balances and Six Ton Hay Scales, by T. S. Dickerson, Brandon, Vt.....	High commendation.
Wire and Picket Fence, by J. B. Reyman, Stockton, Winona county, Minn.....	Commended.
Clark's Improved Vice, by D. O. Daniels, Mount Pleasant, Henry county, Iowa.....	Highly commended.
White's Patent Money Drawer, by J. L. Beath, McLean county, Ill.....	Highly commended.
Edmond's Automatic Turning Lathe and Tenoning Machine, by B. F. Baker, Lincoln, Logan county, Ill.....	Commended.
Machine for Measuring Grain from a Threshing Machine, by Edward Little, Amboy, Lee county	Commended.
Sausage Cutter, by E. Bradbury, Jacksonville.	
Commended.	
Combined Wire and Picket Fence, by James D. Kelly, Pittsburg, Pa.....	Commended.
Machine for Straightening and Curving Iron, by Daniel B. Bolton, Springfield, Ill.	Commended.
Fly and Mosquito Catcher, by A. G. Garfield, Chicago, Ill.....	Commended.
Sewing Needle and Worsted Needle Threader, by David Venton, Chicago.....	Commended.
Smut Mill and Separator, by J. A. Woodward, Oquawka.....	Commended.
Lever Jacks, by R. Kauffman, Sterling, Whiteside county, Ill.....	Commended.
Sugar Mill and Evaporator, by R. M. Hedges, Chicago.....	Commended.
Stump Extractor, by J. H. Withey, Winchester, Scott county.....	Commended.
Apparatus for Stuffing Horse Collars, by William S. Habberton, Mt. Carmel, Wabash county, Ill.	
Commended.	
Excavator and Grading Machine, by G. S. Manning, Springfield, Ill.....	Commended.
Cider Mill, N. W. Sternes, Leavenworth, Kansas.	
Commended.	
System of Cutting Garments, by Mrs. A. M. Richie.....	Highly commended.

Underdraining Machine, by J. B. Cox, Lafayette, Indiana.....Commended.
 Display of Iron Hollow Ware, by Comstock & Co., Quincy.....Highest commendation.
 Sugar Evaporator, by Miller & Benjamin, Springfield.....Highest commendation.
 1 Rifle Gun, by J. F. Redwin, Lynnville, Morgan county.....Highest commendation.
 1 Rifle Gun, by same.....Highest commendation.
 Odometer, by T. Dudley, Jacksonville.....Highest commendation.

Stair Rods, by Stephenson & Tompkins, Jacksonville.....Highest commendation.
 Hard Rubber Truss, (Riggs') J. B. Seeley, Chicago.....Highest commendation.
 Sett of Artificial Teeth, By Bennett & Chaffee, St. Louis.....Highest commendation.
 Planetarium, by Samuel Allen, Pekin, Tazewell county.....Highest commendation.
 Achromatic Microscope, by F. Arnold, Chicago.....Highest commendation.
 Surveyor's Transit, by same.....Highest commendation.
 Two Artificial Legs, by C. Stafford, Chicago.....Highest commendation.

Bedstead by Thomas Bradley, Springfield, Ill. Very highly commended.
 Model of Robinson's Patent Spring Bed Bottom, by Wm. Kellogg, New York City, 169 Canal street.....Commended.
 Sett Buggy Harness, by J. C. Hedenburg, Mt. Sterling, Ill.....Highly commended.
 Sulkey, by C. Atkinson, Vermont, Fulton county, Ill.....Highly commended.
 Weatherstrips for doors and windows, Wm. M. Crooks, Sterling, Whiteside county. Very highly commended.

Ivory and Wooden Ware, by Peter Walsh, St. Louis, Mo.....Commended.
 E. W. Phelps' Movable Comb Bee Hive, by H. Gifford, Danby, DuPage county. Highly commended.

CLASS G.

Bale of Pressed Hay, exhibited by H. D. Penniston, Jennings county, Ind.....High commendation.
 Bale of Pressed Hay, exhibited by L. C. Field, Galesburg, Illinois.....Highest commendation.
 Sunflowers, exhibited by E. Stevenson, Jacksonville.....Highest commendation.
 Green Peppers, exhibited by E. Stevenson, Jacksonville, Ill.....Highest commendation.
 Sweet Pear Pickles, by Mrs. N. Dewess, Jacksonville, Ill.....Highly commended.
 Sweet Cherry Pickles, by same.....Commended.
 Green Tomato Pickles, by same.....Highly commended.
 Pickled Cherries, by Anna Chambers, Jacksonville, Ill.....Highly commended.
 Whisky Pickles, by Mrs. H. H. Ashelby, Jacksonville.....Commended.
 Pickled Cabbage, by Miss E. M. Henry, Jacksonville, Ill.....Commended.
 Sweet Pickled Tomatoes, Miss Viola Matteson, Jacksonville.....Highly commended.
 Maple Syrup, by L. Heaton, Lynnville, Morgan county, Ill.....Highly commended.
 Spiced Peaches, by Miss Mollie Holmes, Orleans, Morgan county, Ill.....Highly commended.
 Two Pounds Sugar, from Chinese Cane, by E. Doty, Jacksonville.....Highly commended.
 Pickled Muskmelon, by Miss Joanna Stacy, Jacksonville, Ill.....Highly commended.
 Rusk, by Mrs. J. T. Alexander, Jacksonville.....Highly commended.

Langstroth's Observatory Bee Hive, by R. C. Otis, Kenosha, Wis.....Highest commendation.
 Langstroth's Bee Hat, by same.....Highly recommended.
 Langstroth's Movable Comb and Bee Hive, with Italian Bees, by same.....Highly commended.

Beehive and Stand, by J. C. Pratt, Morton, Tazewell, Ill.....Commended.
 Sorghum Syrup, by J. H. Armstrong, Orleans, Morgan county, Ill.....Highly commended.

CLASS H.

Show of Foreign Grapes, grown in the open air, by C. H. Rosentiel, Freeport, Ill. Highly commended.
 Collection of Cherries, by R. M. Haskinson, Rushville, Ill.....Highly commended.
 Lot of Raspberries, by same.....Highly commended.
 Lot of Gooseberries, by same.....Commended.
 Lot of Currants, by same.....Highly commended.
 One variety of Seedling Apples, by W. Cutter, Beverly, Adams county, Ill. Highly commended, and worthy of further notice.
 Four Apple Trees, by J. A. Carpenter, Cobden, Union county, Ill.....Splendid growth.
 Six Apples, by B. L. Wiley, Makanda, Jackson county, Ill.....Fine trees for their age.
 Cotton Plant, by Frank Eno, Jacksonville, Ill. Highly commended.
 Plum Marmalade, by Miss Augusta C. Murtfeldt, Oregon, Ogle county....Very highly recommended.
 Floral wreath of Pressed Flowers, by Miss J. A. Patterson, Jacksonville, Ill. Highly commended as an ingenious work of art.

CLASS J.

Carving in Marble, by Alfred Benedict, Jacksonville. This entry should have been under the regular lot "Sculpture." 1st premium recommended.

CLASS K.

Leather Work Frame, by Miss McConnell, Jacksonville.....Highly commended.
 Leather Flowers, by Mrs. N. A. Vanzant, Jacksonville.....Highly commended.
 Hair Bridle, by S. M. McDonald, Jacksonville. Highly commended.
 Five Pairs Mittens, by Miss Electa Tirrell, Plymouth, Hancock county, Ill....Highly commended.
 Infant's Knit Shirt, by Sarah J. Rockwell, Jacksonville.....Highly commended.
 Lot of Mens' Clothing, by E. Hammerslough, Springfield.....Highly commended.
 Pair Black Pants, by Agnes McLaughlin, Lancaster, Ill.....Highly commended.
 Hair Braiding, by Miss A. C. Campbell, Concord, Morgan county.....Commended.
 Specimen of Knitting, by Mrs. F. Dayton, Jacksonville.....Commended.
 Infant's Sock, by Mrs. T. B. Lee, Springfield. Commended.
 Crochet Work, by Miss H. A. Sewell, Jacksonville.....Commended.

CLASS L.

Tooth and Lower Jaw of Mastodon, by Bennett, & Chaffee, St. Louis, Mo.....Commended.
 Collection of Minerals and Indian Relics, by G. W. Scripp, Rushville, Ill.....Highly commended.
 Crinicultural by E. F. Garvin, Chicago. Highly commended.
 Syrup of Blackberry and Sassafras, by Wm. Hamilton, Jacksonville.....Highly commended.
 Lot of Ground Squirrels, by John Black, Jersey Prairie, Cass county.....Honorable mention

Checks for the premiums awarded as above, have been sent by mail to the successful exhibitors.

JOHN P. REYNOLDS,

January 29, 1860

Corresponding Secretary.

Editor's Table.

A SOCIAL CHAT.—The year 1861 is now fairly inaugurated, and its working machinery just beginning to move on its axles, not rapidly, but to show that all is in order and but waiting for a greater pressure of steam. Well, as the sun climbs the southern sky, the developed caloric will evaporate the steam and the great wheels of human industry will begin to move with accelerated speed. Let us sit down by the fireside and have a social chat, but let us ask you if your hogs have a good warm place sheltered from the wind and driving storms in which to run through the day and to take their meals in quiet? How is it about the cows—do you stable those that give milk, or at least have a warm shed for them—for if you do not we will warrant that your coffee is without milk and your breakfast table destitute of butter. Did it ever occur to you, my good friends, that not one-half of our farmers have milk and butter to use during the winter, not because they do not feed corn, but because they do not provide a warm stable for their cows. We have an abundance of corn, but have fed none of it to our cows, and yet we have plenty of milk and make nearly all the butter used in our large family. We simply feed well cured corn stalks through the day, nice well cured upland prairie hay at night, with a feed of small potatoes in the morning. When the weather is fair the cows run in the yard through the day, at other times are in a warm well ventilated stable. Now you may say that to feed small potatoes to cows here, in this great corn yard, is small business; but allow us to assure you that it will pay, besides we will not promise that we may not add to this a feed of meal to our new milch cows in the course of this month, but thus far the small potatoes have given us good satisfaction. Potatoes can be cheaply grown, and when you sort them over the large ones will bring as much in market as all taken together, for what do people in town or city want of small potatoes, they have no cows to feed, and in sorting them out you have them to feed and save your freight. Let us tell you in confidence that we find potatoes to be a profitable crop—we sell the best at a good price and feed the remainder. Is it not too bad for the farmer's children to do without milk during much of the winter? Why there is our friend H., over in the next town, with a farm of five hundred acres, half of which he puts in corn, and with a dozen good cows has

not a drop of milk. He says his cows will go dry as soon as cold weather sets in. Of course they will friend H., so long as you let them run in that stalk field.

It is the little comforts and conveniences that go to fill up the measure of country pleasure and gives to country life its actual zest. While our big farmers are grasping after large farms and great herds, they lose the real pleasures of life. If a farmer had none but himself to live for he might gloat over these idols to his heart's content, and like the miser receive the scorn and contempt of his neighbors, but it is not right that he should deprive his wife and children of the comforts of life that he may gloat over broad acres and revel in riches that they are not allowed to use, it puts us in mind of the Hollanders who keep the best room in the house, shut up from use, and only enter it during interims once a year, like the high priest entering the *holy of holies*. Out upon all such stupidity, we as farmers have the right to the pure air of heaven, good water, plenty of vegetables, small fruits, eggs and chickens, nice butter, pure milk, rich cheese, luscious hams and good beef—if we but will it these are ours; and shall we not at this time lay our plans so as to get them. Let us help each other in this undertaking, and if one of us makes an improvement give it to all the others through the FARMER. We do not want to build up castles to worship, but we want happy homes filled with the comforts of life.

THE PEORIA CLIPPER PLOW.—Messrs. Toby & Anderson have sent us one of their plows for the purpose of having it tested with others that have proved great favorites with us. The plow sent is Clipper No. 6, and intended for stubble or cross plowing. There is no casting about this plow; it is very strong and yet it is not heavy. The land side handle is connected just under the beam with a bent iron attached to the land side, and is out of the way of any rubbish that usually accumulates on this part of the plow; in some places high land sides are used for the same purpose, but these add both to the weight and cost of the plow. The clevis is the most simple and best that we have seen; it is made of three pieces of iron besides the bolts, an ingenious and valuable improvement. The timber used in wooding the plow is very superior, being furnished from the Illinois river bottoms. It is a singular fact that while nearly every stick of timber in our groves are more or less worm eaten, that on the river bottoms is comparatively sound. We shall report further progress in due time.

THE HORTICULTURIST.—This indispensable work is now in the hands of Messrs. C. M. Saxton & E. D. Baker, publishers, New York, who furnish it as follows:

One copy one year \$2 00; four copies one year, \$3.00; the edition with colored plates, one copy one year \$5.00; four copies one year, \$15.00. Any person sending us \$2.25, we will send them a copy of the *Horticulturist* and *ILLINOIS FARMER*, each one year, or for \$4.00, will send two of each to any address. The money for this can be sent either to the publishers at Springfield, or to the editor, Champaign. In making this offer, we do so for the purpose of developing a more correct taste in the establishment of our western homes. The edition with colored plates is especially valuable, and should be in the hands of all who can afford the outlay. The plate for January is a painting of the Galusha grape.

We have all the back volumes of this work, numbering fifteen, not a volume missing, and we look upon them as the richest part of our library, nor would we part with them for no small sum; in fact they make quite a complete library of rural art and rural taste. In the first number we have the first faint dawning of an improved horticulture, which advanced from year to year, the history of whose progress is written in its pages as time wore on, and to-day we find the country occupying a proud position in this regard, and the adornment of our homes among the actual necessities, as well as the luxuries of the age, much of which is due to the valuable teachings of this monthly visitor, which, for the last fifteen years has found a warm place at the fireside of all lovers of the beautiful. We hope to see its circulation widely extended among our well to do farmers, and assure them that it will prove a friend indeed.

BEES.—Now is the time to make such changes as you intend with the stands of bees. They should be placed where they are to stand. Among our new hives we have had one set in a south-east exposure, under the shade of a row of peach trees; it has the benefit of the morning dew until about three o'clock. This swarm made twice as much honey as any other young swarm. They were out of the wind, and having the benefit of the morning sun, were out early to work; and as the hive became cool towards evening, the bees did not leave the hive late, and consequently all returned to the hive at night. We shall place all our stands in a similar position, and about eight feet apart. We have a double row of peach

trees on the south side of our garden—they are eight feet apart, and under the south row, fronting the southeast we shall place the hives. Those that are not double we shall protect with a board roof, to set on the boxes to shed off the rain and to keep the hives cool. It will not do to move the hives after the bees begin to go out, as when they first go out, they mark the place, and return to it; it is, therefore, important that they be arranged where they are to stand for the summer.

Last year we neglected this precaution with some half dozen hives, and they annoyed us not a little, being directly in the way. Now is the time to purchase bees and to get them home.

Stocks that have got thus far through the winter, and have a good supply of honey, will be pretty safe. No farmer should be without bees; they cost but a trifle, and with the Langstroth or Phelps hive are easily handled, and the surplus honey can be taken off at any time.

THORLEY'S FOOD FOR CATTLE.—Some one has sent us a handbill setting forth the merits of this quack nostrum. It is quite reasonable to suppose that concentrated cattle food can be gotten up at 77 Newgate street, Caledonian Road, King's Cross, London, England, shipped across the Atlantic in casks, thence by rail from New York to the western prairies to make beef and pork, to be in turn sent back, of course to a large profit to all parties, purchasing this at the agency, 21 Broadway, New York, at \$14 per cask, containing a measure and sufficient for four hundred and forty-eight feedings or mixing, which to feed with such simples as good hay and corn meal, We commend this new found food to the attention of certain parties in St. Louis who did the country such vast service in introducing the Honey Blade grass; and now intent on another philanthropic measure in disseminating Japan Wheat? which produces at the rate of two to three hundred bushels to the acre!!! of course it will do all this, give it enough years. Well, great is humbug, great shall be Mr. Thorley, the West shall build a monument to his memory, for heretoforth we shall need but a few casks of his "food" to fatten our beef and pork. That a pound of it will make four to six pounds of pork we shall never doubt. As the food belongs to the "quack" line, that is a secret nostrum, we cannot tell exactly how this is to be done, but will take the statement of its friends at par. Will not some cute Yankee beat Mr. Thorley at his own game and fat beef and pork by reading a recipe to the animals. Wonders have not ceased, and we may look for them daily. We have

seen a great many wonders in our day; wonderful seeds and wonderful implements.

But a few years since the world was to be fed with the Chinese Yam, alias *Dioscoria Battatas*, and twenty years ago every American was to wear silk. Cotton, flax, and wool were to be kept as samples of a past barbarous age, but the age of Multicaulus is past and the world wags on, agape for new wonders.

STATE GEOLOGICAL SURVEY—We learn that there is some prospect of the publication of the very able report of the State Geologist, Prof. A. H. Worthen. We have taken the time to look over a part of the manuscript of these reports and know that they will prove valuable to the farmer. Of course they do not embrace every thing in regard to our soil, but they make an able beginning. We had almost concluded that the Legislature was composed chiefly of bogus farmers, or the thing would have been attended to the last session. When the Legislature is composed of a majority of farmers one would suppose that the interest of this class would not be overlooked, but it is too often the case that our farmers, when holding that position, either turn politician or are led by the nose. The present members seem to be more out of the leading strings than former ones, and we shall, in consequence, look forward to some more tangible results.

Pettifogging lawyers and political farmers make poor Legislators. They are too needy or too ignorant to be of any use to the industrial classes. The masses of the people are becoming too well educated to put up with this class of men much longer, mere demagogues, too lazy to work and without sufficient energy to steal, they are foremost in kicking up a row in hopes that something may turn up to their advantage. They have everything to gain and nothing to lose.

It is this class of men who are now busy in breaking up social order and producing a state of anarchy. They have foisted themselves into high places, and are intent upon sucking the life blood from the body politic. Illinois has commenced clearing the Augean stable of these harpies, and the first fruits of their absence is the attention given to the encouragement of the great interest of the State, Agriculture.

TOP DRESS YOUR GRASS LAND—Meadows are greatly benefitted by a top dressing of manure. The fall is a good time, perhaps the best, but

any time when you can drive on the meadow without tramping before the grass starts will do. Next to the garden the meadow is most benefitted by manure.

Several Subjects.

January has been mild with occasional touches of frost, but February has done itself fair credit, as the great northern storehouse of cold congealing chemicals were sent to make huge blocks of crystal ice to lay at her shrine, that the busy hand of man should store away in "tan" or "saw dust" for use, when the dog star will place ice cream at a premium.

Now, when planting shade trees will soon be in order, we shall hear one great ever present theme, rainy weather, deluged towns, bad roads and overflowing rivers; the farmer cannot plant or haul his grain to market; and if his farm implements are *lying about loose*, taking the drippings of the murky rain cloud as it passes over, or his team receive the gentle leakage of a board roof stable, as they stand half knee deep in a mixture of hay, mud and manure, his face must have an additional elongation with a deeper shade of blue. But in all things there is some consolation, and even to this class there is hope of better days. When the rain is pouring down, damaging his uncovered cribs of corn, unprotected implements and sadly housed teams, let him sit down, slate in hand, and figure up the profit and pleasure of his peculiar style of farming; he may also apply the rule of three to the matter of housing his property, and see if he had not better sell part of his stock to make better stables for the remainder; or have less implements well housed; or less horses with more comfortable stalls; in fact to have a proper proportion of housing for all these things. That great blue arch, sometimes studded with stars or hung with rich drapery of the mystic clouds, is after all but an unprofitable canopy for a reaper, wagon, or steel clipper, and we much prefer a vulgar roof of good shingles. The bleak winds which

"Clear the air, and drive the fog away,"

contain no flattering property, nor will it add to the daily milking in either cheese or cream. It is all well enough in its way, but give us shelter for our stock from its rough touches, and we will be content with a small number of our horned friends.

Many of our farmers have too much land, which they overrun with bad culture and dignify it with the name of farming. They expose their stock and implements to the bleak winds, scorch-

ing suns and driving rains, and call it economy, in the great saving of shade trees and farm buildings. Their homes have no attraction because they lack those surroundings that should make up the sum of comforts, that give to the family those bonds of the useful and beautiful that cement them together. Western farming, to a large extent, is but a caricature, and living on the farm an empty shadow and wasting of the substance, which is found in good buildings, well stocked gardens, and fruitful orchards, where Flora stands sentinel amongst the comforts of rural life.

A CHANGE OF SUBJECT.

As our readers know, we sometimes travel, and most generally by rail, when it does not cost too much; and as we are good looking and disposed to conversation, we are generally in the secrets of our fellow passengers and know just what they are after. Of late there has been a wonderful scarcity of ladies and children, old maids and handboxes, young gentlemen with small sticks and old gentlemen with high polished stove pipe hats, and in their place is a goodly share of plain dressed people, farmers and mechanics, real clever, sensible traveling companions, who as soon as they hear our name, begin to crowd around and ask us all manner of questions about the country, the particular advantage of this or that county for farming, or the advantage of this or that village for mechanics, and so busy are we in this kind of pleasant chat that we are sometimes in danger of being carried past the station where we intended to stop, and we fear we shall be, unless the names of the stations are put in large letters over the doors of the station houses. But to return, in these conversations we have made the discovery that nearly all the passengers are of the working class, looking up homes in this great West of ours.— They have told us a great many things, in confidence, of course, about the country where they live, and how they have to dig and haul off great quantities of stone from the land, and to haul great heaps of manure; that the land is piled up into hills, and otherwise spoiled by great ledges of rocks or great deep swamps; that it takes a life time to clear up and put a farm in order, while here, on the broad sweep of our rolling prairie, a home, with all the comforts and conveniences of life, can be carved out and set up in perfect order in two or three years; and that the mechanic has there to pay exorbitant prices for Illinois beef and flour, and they are now determined to settle here and become growers and consumers; that next fall their wives and little ones

will be coming West, when the balance will again be adjusted between the male and female passengers, but all on the incoming trains, as no women and children will be found traveling East. We let you into the discovery, having confidence you will not be telling it to outsiders, so that it will get back to these worthy people who have confided their plans to us with so much confidence in our discretion.

GENIUS WRECKED.—Something over a year since a dilapidated gentleman called on us and claimed to be the inventor of the Fawkes Steam Plow, then as now, standing on our farm. A glance showed us that reason had tottered from its throne, yet it had left him the address of a true gentleman. His statements, though bordering on the marvelous, were always clothed in language correct and respectful, giving the most indubitable evidence that he had been well educated. He gave his name as that of Greenleaf R. Drake, and said that he was formerly of the State of Maine, but had spent some time in McDonough county. He examined the plow with a deep intent, and remarked that it was not built as he directed. A few days after he returned and wished to take possession of the plow, and for the purpose he went to the depot for a car and coal. He also claimed to be the inventor of Waters' Steam Plow, at Detroit, for which place he left. The Detroit papers announced his arrival at that place. During a blustering snow storm of last week who should turn up but our quondam friend, Drake. He had been to Missouri and other points West, had been given twenty minutes by the tender mercies of a vigilance committee at Palmyra, to quit the place, but he bid them defiance and left at his leisure, his insanity doubtless protecting him from these savages in human form. He is waiting for a freeze to take the Steam Plow to Baltimore.

According to his account he was born in 1821, and is thirty-nine years old. At five he invented the Daguerreotype; at nine friction matches; at eleven the Threshing Machine; at seventeen the art of freezing, which he estimates at fifteen millions of dollars, a liberal slice of which he proposes to devote to our especial use; at twenty-seven he invented the McCormick Reaper, the proceeds of which, to the amount of several hundred thousand dollars, he has been done out of. He also claims to be the inventor of the Lightning Rod as now used, and of the Steam Plows, one of which he calls Waters' and the other Fawkes'. He has had numerous balls shot through him, and one of which striking his rib

is yet in his body. He is now in partnership with Horace Greeley in a farming operation in Iowa, whom he has engaged for twenty years to manage a farm of five hundred acres. He has directed us to ship Horace a thousand choice fruit trees. These stories he has repeated at both visits.

Where his relatives are, or whether he has any, is not known, a stray waif upon the river of life, a genius who has become wrecked in his private pursuit, and who may soon go down to his long home, far away from friends, away from kindred, unknown, unsympathised, unhonored and unsung. Such is the fate of genius when she grasps beyond the reach of human ken, and the overtasked mind totters to its fall.

LAKE VIEW FLOWER GARDEN.—Edgar Sanders, the proprietor of these gardens, has sent us his catalogue for the spring of 1861. We are glad to see these establishments starting up throughout the country. It shows that the demand for the beautiful is on the increase, and that our yards and gardens are to be cared for. Heretofore the express charges added to the cost of plants has been a serious drawback to the purchase of budding out plants that have to be renewed annually. But this is no longer in the way, plants can now be purchased at our nurseries and greenhouses even cheaper than at the East, and we hope to see them liberally patronized. Mr. Sanders was the first in Chicago to grow plants at wholesale so as to sell at reduced prices. He led the way, and others follow. The list below will make a good assortment for a flower garden, nearly all of which can be wintered over in the house or cellar. Phloxes, Hardy Perennials, Pansies and Hollyhocks can be left out doors.

18 Verbenas,	12 Pansies,
4 Heliotropes,	4 Scented Geraniums,
6 Dahlias	2 Salvias,
2 Fuchias,	2 Feverfew,
6 Petunias,	6 Hollyhocks,
6 Scarlet Geraniums,	12 English Daisies,
12 Hardy Perennials,	4 Gladiolus,
4 Tube Roses,	4 Maderia Vines.

Those who cannot afford to invest ten dollars can divide the lot and invest a V. No one should have less than a dozen Verbenas, half a dozen Dahlias and the same of Phloxes. These will add much to a small yard. You can grow Verbenas from seed, but they come on so late that we would not recommend the practice, better get a few strong plants early in the season and have a succession of bloom through the summer, than to wait till fall for an uncertainty.

DUPAGE COUNTY NURSERIES.—These nurseries have become so well known that it is hardly worth while to say more in their favor. Next month Messrs. L. Ellsworth & Co. will present the readers of the FARMER with a synopsis of the immense stock of staples in their line. With large green-houses and the best of propagation they have been enabled to get up the largest stock of ornamentals in the west. Send for a catalogue. Address Messrs. L. Ellsworth & Co., Napierville, Illinois.

COMMERCIAL AND MANUFACTURING WANT OF ST. LOUIS, BY L. G. CHASE.—We have received from the author a well printed pamphlet of seventy-one pages devoted to a consideration of the above subject. Mr. C. takes the bull by the horns and advocates cheap lands, manufactures and an improved mode of farming. Great cities are built up from the products of the soil. They need the raw material from the country, without which no city can long prosper. Commerce is well in its place, but when combined with extensive manufactures they are doubly stored with the elements of progress. Mr. Chase will please accept our thanks for his kind remembrance of an old friend, and may he live to enjoy some of the advantages which he so ably advocates.

HARDY NATIVE GRAPES.—Bissell & Salter, of Rochester, have sent us their illustrated catalogue of native grapes. With such grapes as the Delaware, the Diana, Concord and Clinton we may well be satisfied. They all do well here, but the Concord, from its vigorous growth and great productiveness, should be in every garden in the State. We look upon it as the farmer's grape. The Delaware is slow grown, but is very superior. The Clinton has been overlooked, and we are glad to see it brought forward to the attention of the public, it is probably one of the best early hardy grapes.

A MOTH TRAP.—A young mechanic at Springfield, Illinois, has invented a moth trap that he thinks will prove effectual in protecting the bee from this destructive enemy. He destroys the miller, thus preventing the laying of eggs. There are now several patents of this kind, some of them of no particular value, and others complicated and expensive. We are assured by a friend of the inventor that it is very simple and cheap, certainly two desirable qualities providing it is effectual. We hope he has succeeded, for the moth is the great drawback to bee keeping at the present time.

COAL OIL.—When bituminous coal is placed in a retort and heated, it undergoes destructive distillation, that is to say, the elements of which it is composed are separated from each other, so that the substance is no longer coal, but is transformed into a number of other substances, twenty of which have been already separated and examined. Of these twenty, three are oils—*benzole*, *toluol* and *cumol*.

Benzole possesses peculiar properties which render it valuable for many purposes in the arts. It is a powerful solvent for gums, resins and fats, which property, besides rendering it useful when solutions of these kinds are required, make it a very efficient detergent for cleaning cloth, leather, carpets, &c., from spots of grease, resin and tar. It causes no injury to the color, and leaves no odor in the fabric. Benzole is the largest and most volatile of the oils obtained from coal, its boiling point being 186°.

The coal oils of commerce which are employed for lubricating and lighting purposes are principally mixtures of toluol and cumol, generally containing impurities; the heavier oils containing a larger proportion of cumol, and the lighter a larger proportion of toluol.

Coal oil is far superior to any other for lighting purposes; it produces the whitest and most perfect of all artificial lights. It is also unobjectionable on the score of cleanliness; if lamp oil is dropped upon a carpet, it makes a dingy spot, but coal oil, on the contrary, makes the carpet cleaner. Nearly all organic substances absorb oxygen and decay; lard oil, whale oil, butter, &c., become rancid by the absorption of oxygen; but as pure coal oil does not absorb oxygen, it never becomes rancid nor decays. As this oil contains no oxygen, it is a perfect protection of any metal immersed in it from rust, and hence it is particularly adapted for oiling cutlery, &c. As the community becomes more familiar with its peculiar properties, the number of its uses is constantly increasing, and consequently the demand for it is being steadily enlarged.

It is probable that many substances will be derived from coal besides those at present known, and that the applications of this most valuable commodity will be largely increased.—*Scientific American*.

With good kreosone the country people have a light nearly equal to the gas used by our city friends; but we regret to know it is being largely adulterated, we hope a stop will be put to this shameful practice.

BEST TIME TO CUT TIMBER FOR FENCING.—Late autumn is the best time for felling timber for almost any purpose, and it is particularly so when the timber is to be worked up into rails, or stakes, or posts, for fencing. At that season of the year the new wood has arrived at its maturity, and there is less sap and albumen in timber than there is at any other season of the year, which albumen, when exposed to the influence of the weather, hastens the decay of the timber. If timber be cut and split out in the

latter part of autumn, the seasoning process is much more gradual and perfect, because the grain of the timber contracts more equally and uniformly, rendering the timber firmer and less porous, and less cracked and checked than when it has been cut any other season of the year. Timber cut late in autumn, and sawed before spring, will not be injured by worms or rot.—*Cincinnati*.

EGYPTIAN WHEAT.—We were shown, on Tuesday, a head of Egyptian wheat, raised near Hanover, Jefferson county, by William A. Duncan. It must be extraordinarily prolific. The head in question was as large as a medium-sized nubbin of corn, and was filled with grains. The grain is smaller than our ordinary Mediterranean wheat, and differently shaped. Mr. Duncan's father had the specimen we speak of, and he intends to go into the cultivation of it, starting from the head he showed us.—*Indiana State Sentinel*.

About once in five years this many headed wheat turns up to humbug some unwary person. We had our turn at it in 1840; at that time it was pretty generally distributed over the north part of the State. Occasionally it yields a fair crop, the berry is then plump and showy, but the flour is coarse, and of a yellow hue. It certainly has no commercial value for the West, and should only be tolerated for the singularity of its many miniature heads. Some humbugs die a natural death, while others, if dead, return to life at regular intervals, among this last class is the Egyptian wheat.

LECTURES ON AGRICULTURE.—We have received from Prof. Porter the following circular:

In reply to many enquiries from persons desiring to attend the regular Scientific Course on Agriculture in place of the popular lectures which have been postponed, I would state that these lectures are open to the public. They commence Feb. 1st, and are given daily for five weeks by Prof. Johnson. A. J. PORTER.

Garden Vegetables.

There is nothing so acceptable as early vegetables, and one of the most useful aids to this is a hot-bed. Every amateur should have one, as every well regulated horticultural establishment regards it as one of its most essential features. Not only is heat generated by manure more favorable to vegetation than that from any other kind of heat usually applied, but the manure itself, after being so employed, seems better than that preserved any other way. We would sooner have one load of hot-bed manure for horticultural purposes, especially for pot plants generally, than two of the same kind of manure that has not been so employed.

The sashes for hot-beds are usually six feet long, and about three feet wide; costing \$1.50 to \$2.00 when glazed and finished. Most of the cost of sash is in the work, the material costing

little; so that, where strong glass can be employed, glass fifteen inches wide can be used. We have some made this way, costing only eighty-seven cents each, completely glazed. The constant jarring of sash, however, finds out the weak places in the glass, and it is as well to have a few sashes adapted for six-inch glass, in order to use the pieces that occasionally offer from the larger sash. The frame should be about 2½ feet high at back, and 1 in the front—steeper at the back, if anything.

To make a hot-bed, long stable manure should be employed, and if it can be turned a couple of times, before heating violently each time, before permanently using, the more regular will be the heat in the bed, and the longer will it last.

A southeastern aspect is best for a hot-bed, and it should be well sheltered from winds on the cold quarter.

If the ground is dry, the soil may be dug out about a foot in depth, but for very early forcing it is best to have the whole above ground, as when sunk, the cold rains or thawing snow collects in the pit and cools the materials.

The foundation for the hot-bed should be about eighteen inches wider than the frame to be set on it when finished, and the manure regularly laid on till about the height of three feet has been obtained, when the frame may be set on. It is not well to tramp the manure too heavily, or the heat will be too violent. Sometimes the manure is very "strawy," in which case it should be watered with drainage from the manure heap, or the heat will be "a good time coming," when it with compact or heavy soil; the more friable the soil will be.—*S. Edwards, Lake Ridge, Tompkins Co., N. Y.*

REMARKS.—We think the better practice is to use the cobs for fuel; keep them in a dry place, and they make not only good kindling and fuel, and for the summer are very valuable. We find them good to start our greenhouse fire, heating up in a short time. It cannot be possible that an article containing so much woody fibre is of any value as food, especially when ground in what is called farm cob mills.

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- 4th. The soil, climate, and length of seasons are greatly in my favor.
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Is simple in construction, easily learned, and with proper management, never gets out of order.

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Hems, Fells, Gathers and Stitches, and fastens its own Seams—thereby saving time and thread.

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Sews equally as well on Fabrics, from the finest Swiss Muslin to the heaviest Cloth or Leather.

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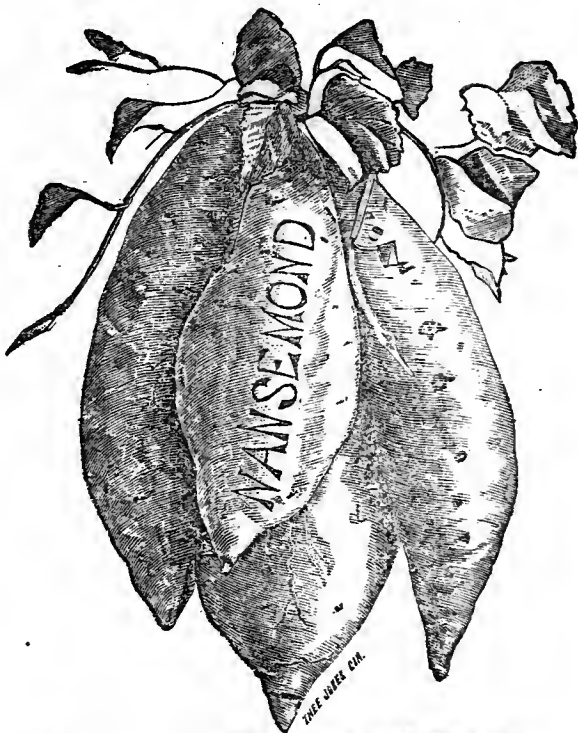
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Hartford, Trumbull county, O. S . A . B U S H N E L L .
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F . K . P H O E N I X .
Bloomington, Ill., Aug. 1, 1859.



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Chicago, Oct. 1, 1860-1y*

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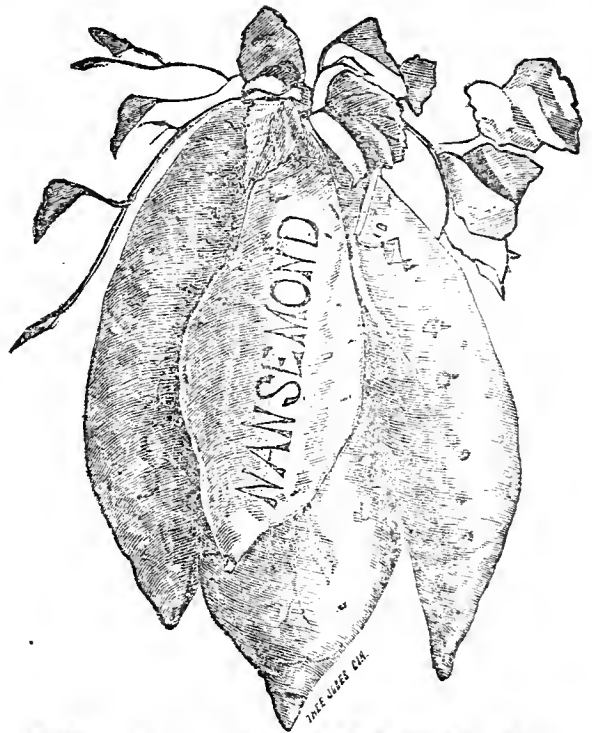
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"We are having a great many inquiries for sewing machines from various parts of the country, and as we can not conveniently reply to them by mail, we have thought it proper to state our opinion in regard to them in this public manner. There are a number of very excellent machines now in the market which are deservedly successful. We have, however, never used but one, namely, Wilson's patent, manufactured by the Wheeler & Wilson manufacturing company, and we can say in regard to it that it is without a rival. No other machine exceeds it in its adaptation to all the purposes of domestic use. It is simple, not easily put out of order when in proper hands, and in point of effectiveness and finish, no other machine stands ahead of it. We state this much in regard to the excellent machine upon our own responsibility; and without the slightest intention to disparage other machines well known to the public; and we hope thereby to save ourselves considerable time and postage in answering letters which frequently come to us with inquiries touching this subject."—*Scientific American*, April 24, 1858.

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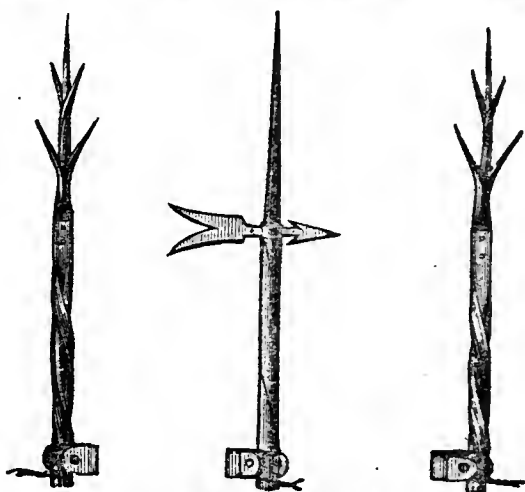
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Gooseberry, Blackberry, Raspberry,
Strawberries, Grapes,
may here be found of the best varieties; besides
Evergreens,

Shade and
Ornamental Trees
and Shrubs,
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We have a large stock of the

SILVER-LEAVED MAPLE,

which is very valuable, either for its fast growth or beautiful foliage. This nursery is gaining a high reputation for the accuracy and thorough manner in which everything is done, and the proprietor is determined to make it worthy the confidence and patronage of all persons. Our Trees, Plants and prices, we are sure, will compare favorably with those of any growth, in the State, and all interested are cordially invited to visit our grounds and see for themselves.

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For particulars address ISAAC P. ATWATER, Morris, Grundy County, Illinois.
The most perfect, substantial and economical Farmer's Sheller ever built.

BLOOMINGTON, April 17th, 1860.

Mr. Isaac P. Atwater:

SIR:—In answer to your questions, I will state that since 10th November last, I have shelled with the McQUISTON TWO HORSE POWER ELEVATOR SHELLER, over 45,000 bushels of Corn, with less than \$5 expense for repairs, and my machine is still in good running order and will probably shell as much more. I have shelled, cleaned perfectly and sacked 80 bushels in one hour, and can do it any day with good corn. Would not sell my machine at any price, if I could not get another just like it. Two light horses have done all this shelling and kept fat. I shell and ear my own corn at an expense of one and a half cents per bushel. Yours respectfully,
WM VREELAND,

Corn Buyer, at C. A. & St. L. Depot.

Mr. JOSEPH LUDINGTON, Corn Buyer, etc., at Depot of Illinois Central Railroad, Bloomington, says: I have shelled about 40,000 bushels since 20th November last, with about \$3 expense for repairs, running every day now. Have timed it one hour and shelled 75 bushels. Common average of every day is 50 bushels per hour. It is the most substantial, durable and economical Corn Sheller I have ever seen. Don't think it can be equaled.

Messrs. AUGLE & ALLER, of Bushnell, C., B. & Q. R. R., have shelled about 40,000 bushels since November last. Machine still in good order and shelling every day. Repairs have been trifling. Sheller and Power considered unequaled. Shells from 450 to 500 bushels per day, depending upon the quantity of corn got to it. Have never seen it fed as fast as it would shell.

Messrs. WYCKOFF & SHREVES, Bushnell, have shelled since November about 50,000 bushels; expenses for repairs not to exceed \$5; is in tip-top order now and shelling from 500 to 600 bushels per day. For economy and perfection of work, have no idea it can be equaled. Have sold a number of machines in the neighborhood and never known one to be in any way imperfect or incapable of giving the fullest satisfaction to the purchaser.

Messrs. COLE & WEST, also of Bushnell, have shelled with their machine 60,000 bushels since last November, and it is now running every day, and from appearances, will shell as much more without any but trifling expense for repairs. Never think of having to stop for any break down or repairs whatever. Can shell, clean and bag just any quantity of corn the men will put into it.

Mr. TAYLOR, of Kewanee, has shelled 35,000 bushels since November. Don't think he has had any expense for repairs. Has run a great many Corn Shellers, small and large, has never seen one before that he considered perfect in every respect. Has never seen two men feed it to its capacity. Thinks it capable of shelling from 500 to 700 bushels per day, if rightly managed.

And I might go on multiplying reports similar to the above, until it would cost me about as much to get you to print it as the profits on the 160 odd machines sold since last October would amount to. It will be understood that the above references are to single machines, that is, one Sheller and its Two Horse Power has done the work named.

If there is any Corn Sheller in the State of Illinois, of any capacity, capable of doing as economical and perfect work, or any Sheller of its capacity able to do as much work, with as little expense for repairs, I would like to hear of it. The parties above named are all responsible gentlemen, who have freely made these statements and volunteered their names as references.

MORRIS, GRUNDY COUNTY, ILLS, April 1860.

ISAAC P. ATWATER,

CAST IRON LAND ROLLERS, 24 INCH N DIAMETER IN 13 INCH SECTIONS.

6 Sections \$45—7 Sections \$50—8 Sections \$66—All hung ready for the field.

TERMS—Cash on delivery at Railroad. Purchaser pay freights.

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All orders promptly attended to and carefully packed for transportation, the name and directions should be distinctly written and the money accompany the order, which may be safely sent by mail.

Address PAUL CHILSON, Bellingham, Norfolk Co, Mass.
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DR. S. BABCOCK, DENTIST, WEST SIDE
OF THE SQUARE, over Chatterton's Jewelry Store. Having permanently located in Springfield, and fitted up good and comfortable rooms, and being supplied with the best material and every description of dental implements, including all the latest improvements, DR. BABCOCK feels under no embarrassment in offering his services to the citizens of Springfield and vicinity, feeling confident that, with nearly twenty years' experience and practice in some of the larger cities of the Union, he can give perfect satisfaction in every operation he may undertake to perform.

Dr. H. pledges himself to perform all operations in his line in as perfect and substantial a manner as they can be done in St. Louis, Chicago or any of the larger cities.

Charges moderate. Chloroform administered when desired.

Jan. 17, 1861.—4t.

THE ILLINOIS FARMER

VOL. VI.

SPRINGFIELD, MARCH 1861.

NO. 3.

March.

"As yet the trembling year is yet unconfirmed,
And winter oft at eve resumes the breeze,
Chills the pale moon, and bids her driving sleets,
Deform the day delightless."

THOMPSON'S SEASONS.

"The heart of the winter is broke," and the genial sun smiles on the landscape just waking from her hyperborean slumber. The mild breeze is laden with the cool exhalations from the yet frosty earth. Birds of passage are wending their way to the further north. The Snowdrop, the Crocus, the Jonquils, the Narcissus, and the more gaudy Tulips are springing up along the garden borders. The signal notes of spring are given, and the farmer is again called forth to resume his labors in the field; not the labor of the galley slave, not the labor of one steeped to the dregs in poverty, borne down by vicious habits, but the free labor of the mind and of the hands, an intelligent labor that can enjoy and appreciate the beauties of the season.

"When day, with farewell beam, delays
Among the opening clouds of eve,
And we can almost think we gaze
Through golden vistas into heaven."

The waking up of vegetable and of insect life, as the sun climbs the southern sky, and as the warm air spreads itself through space, is worthy of our study and most earnest attention. The deep blue of the evening sky, as we look out into the night, yet filled with the lingering frosts of winter, congealing the earth over the newly harrowed grain, pulverizing and making it pliable beneath its touch.

"When night with wings of starry gloom,
O'ershadows all the earth and skies,
Like some dark, beautiful bird, whose plume
Is sparkling with unnumbered eyes."

The Spring wakes up slowly; it does not burst upon us in a day; its warning notes are heard far in the distance, and none but laggards fail to regard its warning. Fences must now be looked to, manures must be hauled out into the garden, field and orchard trees must be pruned that have not been attended to before, the wood pile put in order for the summer, and the straggling cohorts of the farm needs brought into line. This is the month for the sowing of spring wheat, but it must in all cases be sown on fall plowed land, on prairie broken last season, on potato ground or clean corn stubble. The seed should be washed in strong brine and lime, for the purpose of swimming out the oats and to destroy the sporule of smut. The garden borders will need looking after not with a view to hasten growth, but in most cases to check it, for often in this month a few warm days are followed by chilly winds and sleet, which may endanger the young plants.

The plans for the season will now begin to assume form, thought will become action and the swelling bud will soon be a leaf, and the leaf a branch. The embryo flower will spread its petals to the sun, and the sun will paint it with its most gorgeous pencilings. When its beauty shall fade, the fruit germ will appear, and thus the beautiful shall give place to the useful, yet combining both use and beauty. As we plant in the spring cultivate in the summer, so shall we reap in the autumn.

—Men are generally deserted in adversity.
When the sun sets, our very shadows refuse to follow us.

Comment on the January Number.

BY H. E.

EDITOR ILLINOIS FARMER—*Champaign, Ills.*

Dear Sir:—Though not in the habit of writing for the public, and little skilled in English, having spent but few years on your prairies, hardly sufficient to divest myself of the prejudices of the *Faderland*, but I am so well pleased with the soil, climate and the wonderful progress of agriculture on the prairies that I cannot otherwise than take a deep interest in all that pertains to my adopted State. When through the courtesy of the several railroads, I took a survey of the State last season, its advantages, its varied range of climate, its ready access to market, surely, I said, this may with truthfulness be called the "Empire State" of the West. Could the moderately well off farmers in my native country but see these advantages, they would at once be attracted hither. The superior lands of the Illinois Central Railway would soon find occupants, who, by their industry and economy, make comfortable homes, and soon become American in sentiment and practice.

But this is not the subject that I intended to start off on: it was to say a few words in regard to the January number of the ILLINOIS FARMER. I wish to express my satisfaction with its matter and manner. First, I like the plain, large type, and in this respect I think most of our agricultural journals are defective, the type is too small. Germans are used to large type, and on learning to read, are sorely puzzled with the small letters. Farmers are not the best of readers, and of course this large type suits them. I see that some of the dailys are using larger type than formerly; the truth is, they have gone to extremes, and the competition to see who could crowd the largest amount of matter into the smallest space is about done over, or rather over done. I like the new pamphlet form much better than that of last year.

Second, I like short, condensed articles. The farmer is a hard working man, and in the odd time that he has to read his paper, he has neither the time nor disposition to read long articles; therefore, the short, condensed articles of the FARMER are just to my taste. In church, the minister who deals in short, pointed sermons keeps his audience awake, while the long ones, especially in the country, put them to sleep; so of the long chapters on farming, though well

enough for some classes, yet they are not suited to the body and mind of the tired farmer.

From the prospectuses of various papers, I conclude that one of their principle objects is to make the inexperienced acquainted with farming, that is, with the money making—that is the question after all. I like to learn not only the how, but the why, as well as the results of it in figures.

In referring, as an instance, to the different kinds of fences, I have, among the many articles teaching thereon, both in books and papers, never seen one that gave a close calculation how much time and material was required to build a rod of each of the several kinds. In order to have a fair and just comparison, here is another instance: There is now much written on "fruit culture," but I have not yet caught a glance of the cost, though I am reading several papers, that specified cost and average yield of an orchard up to a certain age. I could mention a hundred similar cases.

I like a handy shape in a book or pamphlet. The new form in which you now get up your paper corresponds with my suggestions, and therefore I feel bound to congratulate you.

The article on the "Lumber Trade," and especially the one on "Profits of Wheat vs. Corn," will certainly please, and prove most instructive and valuable to a new settler in the West. Let us have some more of that kind.

One word more in regard to the article, "What crop shall we seed after?" I am aware that there is considerable discussion on this theme. I will not interfere with either opinion. As a foreigner, I only wish to say, in addition, something of the German's theory and practice of "Seeding down to meadow."

His doctrine is:

1st. The land must be free from weeds, therefore, a crop that requires the use of the hoe and cultivator, as potatoes, beets, &c., is made to precede.

2d. The land must be rich. Always select the richest for this purpose, and therefore, the preceding crop is well manured, and the weeds springing up from the manure, destroyed at the same time by the hoe, in order to leave the land prepared rich and clean. If these two points are followed, I care little if sowed with wheat or oats, it is probable that wheat is the best.

3d. Winter wheat or winter barley is selected to seed with for the same reason which you mention.

4th. If winter wheat is not at hand, we seed with barley. Though oats are sown much earlier than barley, we still prefer the latter because it shades the ground less and occupies it for a short time. Winter barley is liked the best, because it ripens first among our cereals. Spring wheat is very seldom cultivated with us.

Now, Mr. Editor, I will close, in order to fulfill, at least partially, one of my suggestions.

REMARKS.—We shall be pleased to hear from our German friend at any time, as we know that he is one of the practical men. One who took his first lessons in western farming as a common hand by the month, such are the men that will add value to our lands, and who will build up the west. They are no carpet knights, who, with a smattering of green fields, write of farming, but men with labor calloused hands wield the pen to enlighten their fellow-laborer.

Ed.

The Culture of the Onion.

We promised in our last to pay more attention to the garden in this number, and we hope that our readers will profit by it. On the subject of onion culture, we shall extract largely from essays by onion growers in various parts of the country selecting such as are adapted to our use:

SELECTION OF GROUND.—A deep loam is considered the best for onions though they will grow on soil a large proportion of which is clay. A light porous soil with a gravelly subsoil should be avoided. The surface of the ground should be nearly level, as hilly ground is liable to wash from heavy rains. In selecting a piece of ground for onions, there are several things that should be considered:

1st Ground that is overrun by weeds and troublesome grasses, should not be chosen until they are first subdued.

2d. Ground that is shaded will not do; neither that which is too wet to be worked early in the spring.

Having attended to the foregoing hints, it is also important to select with reference

to cultivating the same ground for onions for an indefinite length of time, for in so doing, the labor of first preparation is abolished; besides, each succeeding crop is more easily cultivated, provided the previous work has been thoroughly done.

PREPARATION OF GROUND FOR SOWING.

Having made a suitable selection of ground, the next thing to be considered is its preparation. In the next place give the ground a heavy coating of manure. Hog pen is the best home made manure; next stable, if not too coarse; next common barn-yard, if well rotted. As to the quantity of manure on the acre, that must be determined in part by the condition of the soil. From twenty to thirty loads of forty bushels per load, make a very good coat to begin with. But take care not to use seedy manure if you wish to save much labor and patience. Manure may be carted on and plowed under in the fall, or in the spring, just before sowing. If the ground is plowed in the fall, it will not be necessary to replot in the spring. Fall plowing should be put off as long as possible—say to the middle of November.

Having manured and plowed your ground, it is now to be harrowed and raked, until it is as even and smooth as a beet bed. Harrows of either iron or wooden teeth are first used to bring the ground to a general level. The brush or bush-harrows are then used until the lumps are pulverized, and the surface of the ground made smooth, then wooden hand rakes, of twelve teeth each are applied to finish for sowing.

Manure for top dressing may be harrowed or raked in. All manure used should be plowed under or mixed with the soil immediately after it is spread.

SOWING.—Now, then the seed is to be committed to the ground. And here a word or two of caution is necessary. Be careful what seed is sown. If you are under the necessity of buying seed, procure it of some reliable man, a regular, honest onion-grower. It should not be over one year old, and should sink when placed in water. Better

not trust to seed merchants, unless actually obliged to. Rather pay \$5 per pound for reliable seed, than get doubtful seed for nothing.

Plant in drills a foot apart with seed planter, or by hand. To have the rows straight, draw a line, cover half an inch deep. We have seen good crops on prairie that had been broken in March and sowed at once, being well harrowed and rolled. This needed no further attention until harvesting; four pound of seed was sown broadcast to the acre.

The whole secret is deep tillage, manure, thorough pulverization of the soil and clean culture.

The tools needed for hoeing and weeding onions are few and simple. The most approved hoe in use is usually made from a buck-saw plate, either new or worn, cut about eight inches in length, and from one to two inches in width, with a goose neck riveted on the inside of it; or to make the hoe stiffer, two goose necks are used, riveted as before, but about one and a half inches from the ends of the plate, and uniting in one shank in the handle, which may be about five feet long. This hoe should be kept clean and bright, so that the dirt will slide over it without being much displaced. A push or scuffle hoe is sometimes used in the advanced growth of the crop. The tools used for weeds, aside from what nature has provided, are a crooked knife, (common case or shoe knife, with the lower end bent up) and a weeder made of thin steele plate, about two inches long and one wide, riveted with a goose neck, like the hoes, and fixed in a handle.

HARVESTING.—This takes place during the latter part of August and first of September. The time to pull onions, (which should be done by hand,) is when the tops have fallen down and turned a brown or yellowish color. Sometimes on account of the season, or seed, or both, there will be more or less that will not drop down and

dry up. Some have proposed in such case to roll a barrel over them, or break them down in some way, but it is of doubtful expediency. A scullion will be such, whether standing up or bent down. When the main crop has ripened down, it is best to pull them all, and sort out those which are unfit for market, to feed out to the cattle, for which purpose they are esteemed of considerable value. The cattle generally devour them greedily; they should not, however, be fed to milk cows.

The most approved way of curing onions after they are pulled, is to let them lie scattered about the ground for about three days, and then pile them up in small stacks, containing about a barrel each; after remaining so about two weeks, open them and give them frequent stirrings for about three bright drying days, then house them in a perfectly dry condition. The stacking gives them an opportunity to sweat, and keeps them in a measure from the weather, so that when opened the outside skins shells off, and gives them a brighter and clearer appearance, than they would have if left to cure, scattered about the field.

Onions cured this way may be put in bins or bays, to the depth of four or five feet, without any danger of injury, there to be kept, if desired, until the following spring, provided the tops are left on them. If put in barn bays, a rough floor should be laid down on timber a few inches from the ground, in order that a circulation of air underneath may be obtained. Onions should not be kept in cellars unless remarkably dry and cool. A slight freezing does not hurt them provided they are not disturbed in their frozen state.

MARKETING.—This may commence as soon as onions are ripe, and continue until the middle of May following, provided communication is open. The most common way of sending onions to market, is by putting them in barrels with one head, and sending them in vessels, as freight by water is cheaper than by land. This holds good, however,

only for those who are fortunate enough to live in close proximity to the water.

All the preparation onions require for market, is to cut or strip off their tops and put them in barrels. A man or boy will prepare fifty bushels per day. Onions always keep best in their tops, therefore, they should not be removed until ready for market.

GENERAL REMARKS.—There is no crop, perhaps, more sure than that of onions. They are liable, it is true, to blight, but this seldom occurs unless they are neglected. Rich soil, with a good application of manure every year, and proper attention, will almost invariably insure a good crop. Five hundred bushels to an acre is an average crop, though eight hundred are frequently raised.

There are three varieties of onions commonly raised, namely, red white and yellow. The red onions take the lead, as they are more hardy, grow better, and bear handling better than either of the other kinds. The foregoing directions apply equally to each variety, though white ones require more attention in curing, and gentler handling. White onions in limited quantities and in condition sometimes sell for fifty per cent. in advance of red ones.

Onions, unlike most other crops, may be raised on the same ground for an indefinite length of time, without any deterioration in quantity or quality, provided the ground is good in heart. The writer knows ground that has been used for upward of thirty consecutive years for this crop, and the last was as good, if not better than the first.

It may not be amiss to remark just here that skill in the onion business—and it is an important item—is only acquired, as in every other department of labor, by practice. Therefore, it is better for a new beginner in the business to commence on a small scale. And let no one delude himself with the idea of becoming suddenly rich from raising onions. Patient, honest industry will here, as every where else, be rewarded, and when

a good market is within a convenient distance, and the soil suits, perhaps no crop pays better than onions.

For several years past, we have grown what is called top onions. They are early, and a safe crop, but not as profitable as the seed for a large crop. The potato onion is also cultivated by many. Growing from setts of last year will also produce early onions of fine quality. In the West this crop class is too much neglected, but we are glad to know that more attention is being paid to it.

The Culture of Potatoes.

When a boy we had an abhorance to the planting, hoeing and digging of potatoes. It was then the practice to cover them deeply, to make a small mound at each hill, and in hoeing, it was backaching work to kill them up, and again at the digging, to mine them out. We then thought that when we got to be a man, and farmed it to our own liking, that we would either invent some easier process or purchase our supplies, and during the first ten years of our rural life on the prairies, we only grew barely enough for home use. Since then we have been experimenting more or less with the tuber, and think we have made some advances in cheapening their culture. Without going back to what we have done we will at this time give the course that we have laid down for the next crop. We have corn stubble on which to put the crop, it is rich land, but without manure. Plowing in the seed has been our favorite mode of planting for some years, and one that we have no idea of improving upon. To do this we do not wish to plow more than three inches deep, but this on corn stubble would not make what we would term deep culture, and without deep culture we could not expect much of a crop. We had intended to have plowed our ground last fall, but the husking of the corn was delayed until too late, and we are left to the corn stubble. Fortunately, the Messrs. Deer & Co., of Moline, sent

us a very superior subsoil plow last season, and which we find capable of loosing the earth to a greater depth; with the aid of this we shall prepare our potato ground. We plant in the third furrow, making the rows three feet apart. The plow will turn over three inches, covering the seeds of weeds and rubbish, the subsoil plow will follow seven to nine inches, loosening up the earth; on this the seed will be dropped by a boy following after the team. The potatoes are cut one to two eyes on a piece, and these pieces dropped a foot apart. The next furrow covers them. Thus we proceed, drooping in every third furrow, and subsoiling the whole ground. Two teams and the boy to drop, will thus put in two acres a day.

After planting, the land is left in this condition until the plants begin to break ground, when a two horse harrow is put on and the whole thoroughly harrowed, after this the roller follows, so as to as thoroughly as possible pulverize the soil. In the course of a week they are ready for the cultivator, and are worked with this once a week until they are six inches high, when a shovel plow will give them a slight banking up; before the blossoms are well set, they should have another banking up with a large shovel plow. The cultivator is again used to keep down the weeds between the rows, but not so as to disturb the hills, or more properly, drills. If weeds grow on these, cut them up with a sharp hoe, or pull them. We think you will say that thus far there is nothing laborious about the culture of potatoes more than any ordinary crop. The crop being kept clean, there is little trouble in digging. The spade fork is the best instrument with which to throw them out of the hills. We go in for cheap potatoes, and plenty of them.

A MODEL EXCUSE.—A teacher in one of our city schools lately received the following note: "Please excuse—— for being late and charge the same to my account."

A few Questions Answered.

EDITOR FARMER—*Dear Sir:*—Yours and Mr. Walker's answers to my inquiries of 1860, about cellars and forest trees were satisfactory, to which I have added a few improvements which I may give you when I have thoroughly tried them. I am much obliged to you and Mr. W., and now I wish to make a few inquiries about the barn and barn-yard, as follows:

1st. Ought the barn to be set high enough off the ground to let the hogs or sheep shelter under it, or is it best just sufficiently high to keep the rats out?

2d. Should the barn be weather boarded airtight, and air and light it by windows, or is it best to leave the cracks open to let the air pass through?

3d. If it is to be aired and lighted by windows, where would you put them, and how put them in? What kind of glass is best for it? If the windows have shutters, which is best, the solid or lattice shutters?

4th. What kind of flooring is best, cheapest, and most durable for the stalls or stable part? What do you think of a well beaten dirt floor?

5th. How can the stall floors be drained or kept properly dry and agreeable to the horses?

7th. What is the best and most convenient way to preserve the manure so as to keep it out of the way until time to scatter it on the farm, and keep it from making a disagreeable smell, which is so unhealthy to man and beast, and make it most valuable when scattered.

7th. Is there any convenient or practicable way of keeping the barn yard dry without too great expense, I mean greater than common farmers can bear.

8th. What is the best material for the walks to the barn yard?

I ask these questions for the benefit of myself and farmer-reading friends, and all whom it may concern, and will be thankful for any answer through the FARMER, if you think them worthy of an answer.

I would also be very glad to have a general and plain description and plan of a barn and house, with the yard lots and garden, &c., suitable for a small farm. This may require considerable space, but as I have not seen much given to it in the FARMER, I think it worthy of considerable attention, but perhaps you will be weary of so many questions. So no more at present.

WM. L. PROSE.

Tuscola, Douglas county, Feb. 18, 1861.

REMARKS.—1st. Let the hogs and sheep sleep under your barn, if you have them; set it up high. Ours is three feet, and is two feet too low; our chickens have possession of it, and we are well repaid in eggs. The east side only is open to the weather, the others boarded down.

2d. A barn for hay and grain is better to be boarded vertically, and as the lumber shrinks, leaves cracks for the air to pass through to cure the hay or keep it from heating. On the other hand, horse and cow barns or stables should be well battened and warm. When windows are used, the blind will answer all purposes except for transom lights. Shutters are well enough when you use glass.

3d. The upper part of the barn should be well aired, and a large window with movable slats in each end is desirable. Small openings about the stable with shutters, should be used. Common glass 9x14 is a good size.

4th. We have always used a plank floor in our stables, and know little of clay floors. They answer a good purpose, and are cheap, but we would at the same time prefer the plank, though others often prefer the clay. For barn floors we would use two thicknesses of common inch boards, and lay them so as to break joints, and nail down.

5th. Stable floors are laid highest in front, and are easily drained.

6th. We have been in the habit of throwing the litter bedding and manure of the horse stable out to the stock daily; they pick out the fodder. We bed our horses liberally every night, which keeps them clean, and, as the cattle eat this bedding, nothing is lost.

7th. Stack a part or all of your grain, so as to throw the straw into the yard when you thresh, or haul in several loads to be tramped into the mud. In this way our yards are always dry without any particular expense.

8th. In the absence of gravel, coal ashes and cinders make the most valuable walk to

the barn; in fact, the ashes are, in our opinion, the best. These can be had almost everywhere.

We intend to give more attention to farm buildings, but we have been too busy to prepare the drawings and specifications. The suggestion is a good one to add plans of yards. We have a barn 38x48, made of pine lumber, except the sills, and with a few exceptions, the larger sticks are two by eight inches. With light timbers and long braces a large saving of timber may be had in putting up barns, and yet retain all the needed strength.

Ed.

KESWICK CODLIN.—During the past week, our attention has been called to some bearing trees of this old and esteemed variety of apple, in the grounds of Dr. Hoffman, about four miles from the city, on the Detroit road. Our western prairie friends have for a long time considered it one of the sorts to be always planted, no matter how small the collection. From the exhibit of its bearing habits, as well as its well known cooking value, besides being a tolerable eating apple, when fully ripe, one or more trees of this sort should be in the garden or orchard of every land owner. The trees in Dr. Hoffman's grounds are well worth a visit; the fruit hangs in perfect ropes and immense clusters,—*Ohio Farmer*.

We have fruited the Codlin for the last fourteen years, and find it perfectly hardy, a profuse annual bearer, and the best cooking apple of its season. If we could have but one summer apple, this would be the one selected. So highly do we value it, that in our orchard we have over two hundred and twenty-five trees, or over three acres of orchard planted to this one variety.

Ed.

Land-Locked.

Black lie the hills, swiftly doth daylight flee,
And, catching gleams of sunset's dying smile,
Through the dusk land for many a changing mile
The river runneth softly to the sea.

O happy river, could I follow thee!
O yearning heart, that never can be still!
O wistful eyes, that watched the steadfast hill,
Lunging for level line of solemn sea!

Have patience; here are flowers and songs of birds,
Beauty and fragrance, wealth of sound and sight,
All summer's glory thine from morn till night,
And life too full of joy for uttered words.

Neither am I ungrateful. But I dream
Deliciously, how twilight falls to-night
Over the glimmering water, how the light
Dies blissfully away, until I seem

To feel the wind sea-scented on my cheek,
To catch the sound of dusky flappingsail,
And dip of oars, and voices on the gale,
Afar off, calling softly, low and sweet.

O Earth, thy summer-song of joy may soar
Ringing to heaven in triumph! I but crave
The sad caressing murmur of the wave
That breaks in tender music on the shore.

Orchard Planting and Fruit.

ARISPE, Bureau county, Sept. 19, 1857.

MR. DUNLAP—*President Northwestern Fruit Growers' Association*: Your circular was received in due time. I regret to say it will not be convenient for me to be present, as our county Fair is held at the same time of the N. W. F. G. A., which I feel much interested in, as well as the Association.

The circular sets forth the objects of the Association "To correct the nomenclature of fruits to compare their qualities, best mode of propagation and culture, effects of soil, aspect and climate, hardness of varieties, best modes of keeping, profits, insects injurious thereto," &c. My experience is quite limited on many of those subjects, as regards PROPAGATION.

We will take up the apple first. I contend the best way to propagate it is by grafting one year old seedlings at the collar, and cut the root off eight or ten inches long, and throw away the lower part. When grafting in this way, it is done by whip grafting, the scion and root being nearly equal size, they grow as smooth where united as though it had never been grafted, the root being but one year old, throws out roots equal on all sides. Trees in this way will be as large at three years old, as those worked on pieces of roots will at four years, generally. Where pieces of roots are used, it is necessary to use long grafts, and set so deep as to have three-quarters or more of the grafts under ground. In this way the graft soon throws out roots from itself, which take the lead, and the piece it was set upon loses its vigor, and one or two roots from the graft grow very vigorously, and frequently on one side, so that when the tree is taken up for transplanting, it has one or two, or more large clubbed roots. Trees of this kind are much more liable to get leaned over sideways by the wind than those with roots developed on all sides, although with care will grow and become good trees.

BUDDING, when done on small stocks, at surface of the ground, is nearly as good as grafting. Some, no doubt, will contend that it is equal, if not better; a bud is always upon one side of the stock, which takes several years to get grown over, whilst the graft is directly on the top of the stock, which makes a straight tree, whilst the former is always more or less crooked.

Grafting and budding up standard height I consider very objectionable, as the graft or bud frequently outgrow the stock; another

objection is, seedling trunks are much more likely to sprout about the roots, and experience teaches that many seedlings are not so hardy as the variety worked on them.

ORCHARD CULTURE.

The best modes of culture for the orchard I consider is, to keep the ground in cultivation every year in potatoes, beans or corn. Trees cultivated will not fruit quite so soon, but will grow large, and produce more fruit at the end of ten or twelve years than though allowed to grow more slowly by being laid down to grass and fruiting younger, and are not so liable to be attacked by the borer, as when more neglected; it is not advisable to apply any manure at transplanting but a great advantage to put about a wheelbarrow load around each tree in the fall before the ground freezes, and in the spring, after the frosty weather has disappeared, level it down and leave it on the surface, as mulching. Persons that have not practised it have but faint ideas of its benefits. This treatment will apply to all kinds of fruit trees; only should be varied according to size of trees and quality of soil, &c.; if soil is loose and rich, use coarse and poorer manure. This application will be found very beneficial every year; it prevents the ground from thawing during winter, and keeps the trees in a dormant state all the winter season, in consequence they lose none of their vitality by thawing and freezing of their roots, as is often the case in winter, will grow more vigorously, with darker foliage, and more healthy appearance.

PRUNING.

There is a very erroneous opinion among almost all in regard to heading out their trees. I see all orchards almost invariably with trunks four or five feet high, and then the branches all pruned off smooth, so as to make a trunk of each, with all the branches for fruit as high up as you can reach, which gives the trees a small top and very thin, leaves it so open that the wind has more force through it to blow off the blossoms and fruit. Trees headed out near the ground, left with their full natural top, will generally fruit much the best; some varieties require little thinning, and many none at all. In this windy, prairie country, I find by experience that many trees that grow rapid while young, with tops seemingly much too thick, as soon as they commence to fruit, the branches bend out and open the top sufficiently, for instance, yellow Bellflower, planted ten years on good prairie soil,

on my place, with red clay subsoil, are much larger than any other variety of same age, were never pruned, and have very thick, heavy tops. This year they are fruiting, most of them; full limbs bending over and opening the tops plenty enough for light and air.

THE SOIL.

The effect of soil, I am not prepared to discuss, but believe any of our soil will produce good orchards that will produce good crops of corn, wet or dry.

ASPECT.

The best aspect for nursery or orchard is an easterly or southern one, always avoiding a northern or western; protection from the north and west I consider indispensable.

PEARS.

We have been successful with pears, in propagating both by grafting and budding. We generally import our stock, so they are frequently not at hand at the grafting season, then we bud. Pears worked on the quince we prefer budding, (in August), as near the ground as it can be performed. We use both the Angers and Fontenay for stocks; we prefer the Angers, as it is easier propagated from cuttings than Fontenay, and about as hardy, grows more smooth and clear of thorns. Last winter we lost nearly all our young stock of dwarf pears, and nearly everything else of one year's growth; all were killed in the root, and not in the top; our ground was cultivated with small double shovel plows, and left quite level on the surface. We are of the opinion that if the ground had been turned up against the young trees with a mould-board plow, so as to have left it quite low between the rows, it would have kept the water from the roots and possibly saved the young trees. Our dwarf pear trees in the garden, five to seven years old, a portion of them, are fruiting well this season. They were mulched last winter with manure, with exception of one row of eight or ten; those that had no mulching bloomed and partly leafed out and then died; aspect sloping to the south, soil mixed with sand sufficient to not retain water but a short time. Stevens Genesee, Flemish Beauty, Louisa Bonny de Jersey, Belle Lucretia, White Doyenne, Madaline, Heathcoat and Swan's Orange appear to be the most hardy in my list.

CHERRIES.

We formerly propagated on the Mazzard stock; they so universally killed last winter we have re-

solved to discard it altogether, and use the Mahaleb, which stood last winter well. The Heart and Bigarreau varieties are too tender for this section; our dependence must rest on the Duke and Morello varieties, for the present, at least.

PLUMS.

We have generally worked on the tame, but vast quantities of them root-killed last winter. There is no doubt but that we must rely entirely on our own native wild plum for stocks, worked at surface of the ground. We have not had experience enough yet to justify us in recommending any particular variety as most profitable, although some varieties promise much better than others. In the course of eight or ten years we can better judge of the good and profitable varieties of apples, pears, cherries and plums.

PEACHES

We have nothing to say about in particular, more than every one should try to raise enough for their own use, even if the trees should kill occasionally.

INSECTS INJURIOUS TO FRUIT TREES AND FRUIT

Are the borer in the apple tree, near the surface of the ground; the best way is to cut them out with a knife and cover the wound with earth. Catapillars can be gathered in their webs in the hand and crushed under foot. The curculio, the greatest pest of all, we do not know of any remedy to prevent them from puncturing the fruit; we have succeeded in saving the fruit by jarring them off upon a sheet made for the purpose. This is a long and tedious process, to be followed up every morning for six or seven weeks; if making a hog yard of the plum orchard, as some recommend, will answer the purpose, it will be the cheapest and easiest of any plan. This we intend to try. A gentleman of strict integrity told us a few days ago that he had always been badly troubled with the borer in his orchard; last spring he washed his trees with a wash recommended in Thomas' Fruit Culturist, made of soft soap, sulphur and tobacco water, said it was an effectual remedy. Since the application early in spring, he had not found a single borer.

VERRY ALDRICH.

The above has never before been published, and as it has lost none of its value by lying over, we now send it forth. It will be seen that Mr. A. is opposed to top or stock grafting, and is a warm friend of shelter. We hope to hear some of the later experience of friend Aldrich.

ED.

[From the Cuban Messenger.]

THE CLOUDS.

From the Spanish of Da Luisa Perez de Zambrana.

With wings outspread, how softly fly
The silent clouds athwart the sky!

Behold them pass o'er hill and groves,
As pass at eve, white flocks of doves;

And now they fling adown the air
Their graceful scarfs of vapor rare;

That softly gleams like waves of foam,
All bathed in light from Heaven's dome;

And now recoil they gaily trail
Before the sun their wanton veil;

Like fies of swans they now forsake
The fields of air and seek the lake;

They float and toy upon the tide,
Then ope their wings with graceful pride;

And, beauteous, thence enamor'd rise
To kiss the stars that gem the skies;

Now slowly they glide, dispensing dew—
A silken gauze o'er ether blue!

Now coiling up their floating trains,
They seem a flock of sleeping cranes;

Or now fair brides with veils of white,
That seek the sky all robed in light;

Or a sweet choir of virgins fair,
On gold wings borne, with flowing hair;

Or flutt'ring robes the cherubs wear,
That sweep along the halls of air;

Or angels bright, that meekly bear
The Eden crowns of jasmines rare;

And now they float on ether's sea,
Bright barks of pearl that swiftly flee;

But I believe each cloud to be
A glorious soul by God set free;

That from earth to heaven doth rise,
Receiving there its meted prize!

PROPAGATION OF FINE ROSES.—It may not be known to many of our readers that the fine roses of the China varieties may be readily propagated by means of slips. Cut from the small well ripened wood, slips three or four inches in length, strip off a part of the foliage, and insert them in clean white sand, placed in pots or boxes. Keep them regularly watered, so that they may not get dry, and at a regular temperature. They strike root very freely. Some practice covering them with bell grass, but those of most experience do not consider the practice necessary. Ladies may also propagate any of the choice roses desired, by budding, in the same manner as fruit trees are buded. It adds much to the beauty of the hardy climbers, to have the main trunk variegated with branches of roses, of different shades of coloring.—*Maine Farmer.*

—The red, white and blue—the red cheeks, the white teeth, and blue eyes of a lovely girl—are as good a flag as a young soldier in the battle of life need fight for.

[From the Chicago Tribune, May 1858.]

The Farm and Garden.

An Unexpected Present—The Dioscorea Batatas, or Chinese Yam.

Yesterday the express brought us a suspicious looking box. It was nicely made of halfinch pine, two feet long, and of a capacity of two inches inside. We debated some time, considering whether it was safe to open it. It was too light to contain fire-arms, and had too expensive a finish to contain plants. True, it was labelled from the DuPage County Nurseries of Messrs. L. Ellsworth & Co., but when we call to mind the frauds in the refilling Dupont powder kegs, and second hand flour barrels, having on them choice brands, this did not allay the suspicion in the least. At last our curiosity overcame our prejudice, and off came the lid, and there, nestled in moss, lay a vegetable product twenty two inches long, one-third of an inch in diameter near the top, and an inch in diameter near the base. The root has a gradual taper from the top downward some fourteen inches in length, thence maintaining a uniform size for three inches; thence gradually tapering to a blunt point, the end being turned up like a sled runner. Judge of my surprise to have in our own possession so noble and magnificent a specimen of the great wonder of the age, the "Chinese Yam," or "*Dioscorea Batatas*."

This celestial plant was introduced into Europe twenty eight years since, and its high merits have given it such a rapid spread among the great masses, that in this incredibly short space of time, it has reached the wide-swalling prairies of the far-off West, and in the next two years we may confidently expect to hear that it has crossed the great Father of Waters, and is thrusting its long roots deep into the soil at the base of the Rocky Mountains. Whether it will climb that pile of towering granite, to feed the gold seekers of the auriferous shores of the Pacific, we must leave to the great future to unfold. Certain it is, that should it reach the industrious tribe of Digger Indians, it would forever banish grim-visaged famine from the picturesque valleys of that interesting people. We have many glowing accounts of this growing wonder, and at least one man wishes for no higher honor at the hand of mortals than to have awarded him the credit of having brought it to the attraction of "Young America." "It is the greatest boon that can be given by God to man. The plant is destined to equal cotton in value, by supplying the millions with cheap food, and silence its enemies, and, like the potato, cover the whole land."

Should we not raise a monument to the memory of those great men who have rescued this plant from the Chinese, within whose walls it has not been appreciated, and especially the disinterested horticulturists who have sent this "great boon" in tin cases through every express to all parts of our beloved country? We feel it our duty to head a subscription for a monument in which no one shall be allowed to subscribe more than ten cents, so as to give the "million" an opportunity to show their gratitude. A premium of forty cents should be offered for the best plan of the designs to be cut thereon. On one side should be a "Dioscorea" rampant on an island, bordered with a row of *Morus Multi-caulis* filled with silk worms, busy with their spinning; a field of Rohan potatoes, and four rows of China tree corn, and the same number of the Wyandott, with the small spaces filled with a few hardy varieties of native grapes, all "more prolific and valuable than the Isabella or Catawba."

With all modesty we present our plan of this towering monument, that, like the leaning tower Pisa, shall be the wonder of all future time. So soon as the plan is approved by the "million," and the proper officers elected, we will send out a circular to let the world know where to deposit the dimes.

It was half a century before the potato became well known, and its merits as food appreciated, but then there were no railroads, no steamboats, no mails, and but few schools. The dark ages were just beginning to lift their sable curtains from the western horizon, and the dawn lighted up the banner of the Saxon, and it became the day star of hope to genius, whose onward progress has not been stayed by even the high stone fence that encircles the great empire of the "brother of the moon." The potato has become the every day food of the temperate zone, is of easy culture, growing upon almost any soil, and producing, in many cases, hundreds of bushels to the acre. From twenty to sixty bushels can be dug in a day. What then may we not expect from the *Dioscorea* in these days of great things? Within the next fifty years it will have reached every part of the country, and genius will have come to its aid, and its huge roots, such as we have received from our friend Ellsworth, will be excavated by steam; in fact, we have already seen the rude drawing of an excavator, driven by a thirty horse power engine, digging the "farinaceous wonder" from its lower depth. We must look forward to the day when

this "food for the million" will be but the plaything of machinery that will plant, cultivate and dig it, as well as send it ready cooked to our tables. Wonders are never to cease, and we may confidently looked forward to others, emanating from the same source, and the Saxon banner shall wave over Pagodas, or point the investigating line of march over the mystic fields of Bohea and Souchong.

WHAT WE DID WITH OUR BATATAS.

Six inches of the lower end of the specimen we cut off with our pen knife and sent it to the kitchen, where it was placed in boiling hot water, and in the incredibly short time of twenty minutes, was cooked through and through. It was then served up and partaken of by ourself and Mrs. Rural, and a large numbr of young Rurals, and our gardener, all of whom agreed that it was equal to the common potato in some respects, but as compared to the sweet potato, it was not to be considered in the same list. The flesh is white and farinaceous, too much so to have the value of the common potato for food. Its taste is agreeable and pleasant, and could it be produced as cheaply as the common potato, would probably prove valuable to mix with flour for bread.

The remaining sixteen inches have been placed in a hot bed, like the sweet potato, to grow sets for planting. These we propose to distribute gratis to the "million," for their especial benefit. We have been careful in our account not to touch upon the rights of others in regard to this plant, and before sending this copy to the printer, have taken the opinion of eminent lawyers that it contains no slander against the great "Llama;" but is a simple narrative of facts and fancies wisely adapted to the "million."

RURAL.

By the date of the above, it will be seen that near three years have elapsed, and yet the plant has met with no further success, and some of its friends propose that it be planted along the routes of travel to the Pacific and the gold diggings this side of the Rocky Mountains. Wonder if these disinterested philanthropists would be willing to sell the plants at reduced rates. When this humbug was first attempted, we took our stand against it, and came near being involved in a suit for damages, in using pretty plain Saxon in regard to its value, but we have outlived all this, while the humbug

has taken the stand we assigned it five years since. When this class of men are headed off in one direction, they turn to another; at one time vending lottery tickets, at another, Chinese tree corn, Rohan potatoes, *Morus Multicaulis*, new seedling strawberries, grapes that beat the world, Honey Blades grass, prolific corn, or Japan wheat; they are never idle, and that large class of farmers who take no agricultural paper become their easy victims. ED.

[For the Illinois Farmer.]

The Gopher.

NEAR MORRIS, Grundy county, Ill., }
February 18th, 1861.

I read in your January number, "Gophers Again." Let me tell you my experience, and how to trap them. Some ten years ago, I planted five acres in apple trees, on sandy loam, with gravel subsoil, with gopher hills thrown up in abundance. Some two years afterwards, as the frost thawed out in the spring, some twenty of my best trees tipped over, minus their roots. I despaired of an orchard on such gopher land—my neighbor, Bill Johnson, who worked my orchard in corn, proposed a war on the tribe, and figured thus—bear in mind that as their deeds are evil, they prefer darkness to light; that they will not permit a ray of light to shine into any of their holes leading to their subterranean passages. Open their holes at one or more places in their hills leading down to the main passage, take a small, very strong steel trap, set it deep in the ground at an angle of about forty-five degrees, with the pan fronting the road way, leave a little ray of light at the surface, shining over the trap. Mr. Gopher at once repairs to the spot "dirt in hand" to repair the breach and soon falls a victim to their antipathy to day light. I have never seen them carry dirt in their pouches as some suppose, but shove it before them with the fore paws, and are always caught by the fore feet, and frequently by the claws, and sometimes spring the trap with the dirt ahead of the paws. Gophers are not so numerous as their hills would seem to indicate. Johnson caught about ten in my orchard, since which, once in a year or two, I discover fresh hills. Trap a gopher, and all is silent again; try it, and my word for it, you will give room for this or some better dressed article in your paper forthwith.

Our neighbors north of the Illinois river are not troubled with the real gopher, but think they are, mistaking the striped prairie ground squirrel for gophers.

Yours, not *in cog.*,

L. W. CLAYPOOL.

P. S. Above I send you my experience in gophers, which has been rather serious. You can publish it or not, as you choose—it will only cost you the reading. I do not profess to be a scholar, having received my education in this country in 1834, in a log cabin, by shell-bark fire light, my only neighbors being "Native Americans"—Shabona, Wauponsa, and their tribes—nevertheless facts from such a source are of as much value as if emanating from a palace.

Any smart boy with two or three small, strong steele traps can rid your premises of gophers in a day or two—the springs should be stronger than usual in small traps, as they have to spring through loose earth.

Push on your paper (I will not say "valuable," as that is a hackneyed phrase), and I will agree to read it.

Should you ever be at Morris, a ride of two miles will land you at my farm, where you will find all sails set to the plow, and your humble servant not progressing backward, I trust

L. W. C.

We shall hope to hear from Mr. C. often. His is one of those practical pens that give value for the space occupied. We hope to drop down on you some day, and look through your domains. We have driven the gopher out of our grounds by throwing down their mounds with the cultivator. A large colony were safely entrenched near our west line, through which we run a belt of maples. The first winter and spring they destroyed about two-thirds of the trees within their garden. Last season we gave weekly workings, and the gopher left. This our readers will recollect, was the plan of John R. But when they cannot be reached in this way, the trap will take them out, and we are not sure but the plan of Mr. C. is the best, for that is the end of Mr. Gopher, while the other merely changes his location. We do not think the gopher is known north of the Illinois and east of the Mississippi, the people there calling the little striped

squirrel the gopher, which is an error. It is certainly very singular that they are not found in that part of the country, while below that point they are on both sides of the Mississippi.

Ed.

The Plantain and Yellow Dock.

TUSCOLA, Douglas county Ills.

EDITOR ILLINOIS FARMER—*Dear Sir*: I notice in the January number that your correspondent complains of the plantain, the yard plantain, I presume.

Well, we had a hearty laugh at Mr. John R.'s effort to destroy it by exactly the process which is most calculated to make it spread, and give it a chance for a more thrifty growth.

Now, permit me to inform you and your readers, if you do not know, that the yard plantain is one of the most valuable plants in our country. There is no better cure for a poison or snake bite, or the sting of insects, on either man or beast. If a person is bitten or stung, take of the plantain, put it in a linen rag, and rub and pound until well bruised, then pour on a little water and ring out two or three spoonfuls of juice and drink, alone or with milk, and bind some bruised leaves on the wound.

If taken in time, the bite or sting will affect but little. For a good dog snake bitten, take of the plantain and boil in sweet milk, and give it to drink, and for other animals, mix it with their food, or any other way that they will eat it. There is nothing better; but this is not all, it has many other valuable properties. With the plantain boiled in sweet milk, the mother cures the flux in a few hours.

But if John R., or anybody else, has too many of these plants, and wants to get rid of them, let him not mow them off above the ground, for that only kills the grass, and lets the plantain spread itself and grow faster.

The best, and, I believe, the only effectual way to destroy it in a lawn or yard, is to dig it up and mellow the ground and set in heavy shading grass.

The yellow dock is also very useful sometimes, but too much of a pest to keep much on a farm. Let it grow on the side of the road. It will also die among heavy grass.

Very truly yours,
WM. L. PROSE.

—An Irish lover remarked that it is a great pleasure to be alone, especially when your "swate-heart is wid ye."

Herkimer County Dairies.

The editor of the *Genesee Farmer* spent a few days among the celebrated cheese-makers of Herkimer county, N. Y., and writes of what he saw. Hear him:

"We had supposed that the excellence of Herkimer cheese was due, in a good degree, to the excellence of the natural pasturage; but while this is doubtless true, to some extent, the pastures generally were by no means of unusual excellence. In old pastures there is a great variety of grasses, and this is one reason of the superiority, and it would be well to take lessons from nature, in the formation of pastures."

"Those acquainted with the English method of making cheese, will see in what respect the two processes differ. In Cheshire the whey is removed by pressing down a flat bottomed pan gently on the curd in the cheese tub, and allowing it to fill. When the curd is thus partially freed from the whey, it is again gently broken and allowed to settle and separate, and the whey is baled out slowly, the curd being placed on one side of the tub, which is slightly raised, and a board is placed on the curd, with heavy weights on top to press out the whey. The curd is then cut into pieces six or eight inches square, and again pressed with heavier weights. When as much as possible is removed in this way, the curd is placed in a vat and gently broken. It is then put under the press, and a slight pressure applied at first, is slightly increased, till no more whey can be pressed out. To facilitate the flow of the whey, the cheese is pierced with skewers. This preliminary pressing occupies four or five hours. The cheese is then taken out of the press, broken up again very fine, salted, put in the vat again, and pressed under a heavy press for three or four days—clean and dry cloths being put around the cheese as the old ones become wet."

We think a great deal is due the rich grasses of the soft water districts in the making of cheese. Yet our western people should pay more attention to this subject. Will not some of our readers give us an article on this subject.

Ed.

Stock Items.

SHEEP IN SAXONY—Saxony, which is not larger than Rhode Island, keeps 3,500,000 sheep; Ohio, several times larger, keeps about the same number.

PRECOCITY IN HEIFERS.—The *Village Record* of Westchester, Pa., says D. B. Hinmans own an Alderney heifer, which produced *twin* calves at the age of thirteen months and twenty days.

NEW WAY TO KILL LICE ON CATTLE.—Mr. Alvord, who writes for the *Country Gentleman*, has a novel mode of killing lice on cattle. He has a little instrument which is filled with tobacco; this is set on fire, and the smoke is conducted by a pipe into close contact with the body of the animal. Of course smoke poisons them and they die.

COLORS OF HORSES.—A good horse cannot have a bad color. Dark chestnut was preferred by the old Arabs. They never prayed to Allah for deliverance, unless their pursuers rode chestnut colored horses. George the Third had a passion for consumara cream color. Bay is a favorite color with Americans. White horses need careful grooming to look well.

SWEENEY IN HORSES.—We often hear the expression, "when a horse is lame in the shoulder, that horse has the sweeney."

Now, Mr. Editor, will you please ask your Veterinary correspondent to tell me if there is any such disease, and what is its cure? I have had just a little experience in horses, and when those said to be affected with sweeney have come into my hands, I have relieved them from all lameness in from two to four weeks, by bathing the muscles on the inside of the arm and shoulder near the upper part. But I cannot find any author who talks of "sweeney" as a disease; therefore my question. Is there any specific disease of that name? What is its cause, and how is it cured?—E.

Propagation by Root Cuttings.

Few persons know with what ease many shrubs and even trees are propagated by cuttings of the roots. The way to do this successfully, is to prepare a piece of good ground, deeply dug or trenched, well pulverized and underdrained, the soil to be selected with reference to the nature of the plants that it is desirable to propagate; for, unlike cuttings of the branches, those of the roots form no callus, and the pure sand so necessary to the former method, is not so in this. Of course, all good garden soil contains sand, in a greater or less proportion, and such plants naturally prefer sandy soils must be propagated in such. When your soil is prepared, make cuttings of the roots you desire to increase. Select pieces from a quarter to over three-quarters of an inch in diameter, and from four to eight inches in length; plant them with the upper end a very little below the surface of the soil. In a few weeks, these pieces will have pushed out an abundance of fibrous roots, and a bud or buds will have formed at the upper end, and this without there having been any trace of such previously. Cuttings of this kind often make good plants the first year. This is a common method of propagating the hawthorne for hedges in England, and form a hedge faster than when grown from the seed. Nurserymen take advantage of this method to increase the stock, especially of such plants as are of slow growth, or are difficult to propagate by seed. Plum stocks are often raised by this means, and also cherries; but many object to the latter as producing trees that are short lived, and liable to sucker. The quince succeeds well, treated thus; but the usual method is by cutting off the branches. The Japan quince is more easily increased by this means than any other, and the same may be said of a great number of our ornamental shrubs and trees. Even many kinds of evergreens will do well, and form nice plants under this treatment, although this

is seldom tried. The common Altheas may be increased to any extent thus.

The best time for planting these cuttings is early in spring, before the plants have leaved out. Of course, all plants will not succeed in this manner. Some require that previously formed buds should exist. The dahlia is an example of this among herbaceous plants; but all plants, with a natural tendency to sucker, will be sure to succeed.—*Ohio Farmer.*

Sleep.

Dr. Cornell, of Philadelphia, contributes to the November of the *Educator* an article on sleep, from which we make the following extracts:

"No one who wishes to accomplish great things should deny himself the advantages of sleep or exercise. Any student will accomplish more, year by year, if he allow himself seven to eight hours to sleep, and three or four for meals and amusements, than if he labors at his books, or with his pen, ten or twelve hours a day. It is true, that some few persons are able to perform much mental labor, and to study late at night, and yet sleep well. Some require but little sleep. But such individuals are very rare. G. N. Pichgru informed Sir Gilbert Blane that, during a whole year's campaign he did not sleep more than one hour in twenty-four. Sleep seemed to be at the command of Napoleon, as he could sleep and awake apparently at will. M. Guizot, minister of France under Louis Philippe, was a good sleeper. A late writer observes that his facility for going to sleep after extreme excitement and mental exertion was prodigious, and it was fortunate for him that he was so constituted, otherwise would have materially suffered. A minister in France ought not to be a nervous man; it is fatal to him if he is. After the most boisterous and tumultuous sittings, at the Chamber; after being baited by the opposition in a most savage manner—there is no milder expression for their excessive violence—he arrives home, throws himself upon a couch and sinks immediately into a profound sleep, from which he is undisturbed till midnight, when proofs of the *Moniteur* are brought to him for inspection. The most frequent and immediate cause of insanity, and one of the most important to guard against, is the want of sleep. Indeed, so rarely do we see a recent case of insanity that is not preceded by want of sleep, that it is regarded as almost a sure precursor of mental derangement. Notwithstanding strong hereditary predisposition, ill health, loss of kindred or property, insanity rarely results, unless the exciting causes are such as to produce a loss of sleep. A mother loses her only child, the merchant his fortune; the politician, the scholar, the enthusiast, may have their minds powerfully excited and disturbed, yet if they sleep well, they will not become insane. No advice is so good, therefore, to those who have recovered from an attack, or to those who are in delicate health, as that of securing by all means, sound, regular, and refreshing sleep."

Hens—Best Breeds—Hints on Breeding.

The question is often asked, "Which is the best breed of hens?" This is a very difficult matter to decide; nearly every variety has its own particular admirers. You may ask a dozen different persons their opinion on this matter, and they will recommend as many different varieties. But as I remarked in a former article on the subject, the profits of poultry raising depend more upon the manner of keeping, than upon the breed. As a general thing, the smaller breed will be found most profitable; at any rate, the indications are that is so, as in this section all the large fancy breeds of fowls, the Shanghai, Cochin China, etc., have been got rid of, as I suppose the old fashioned barn-yard is found to be more cheaply and easily raised, and to give more eggs and better flesh. But, as before remarked, by judicious crossing with some of the imported fowls an improvement is made; for instance, crossing with the Spanish, the half-bloods will invariably commence laying younger, generally before they are five months old, and earlier in the season than the full-blood Spanish fowls.

Another evil too prevalent, is in-and-in breeding. My plan, when I commenced, was to procure a cock and hen from widely different parts, so as to avoid any relationship. From these I breed, saving four pullets, and again purchased two of the finest cocks I could procure from a different place. For this pains, I think I have been fully paid, as my stock of fowls became much hardier than my former stock. This plan of breeding I have adopted with all kinds of poultry, and I can confidently recommend it to others.

Hens will not flourish in a crowded state, neither will they lay so well when great numbers are together. In summer, when the weathers hot, if kept in close quarters, fowls will sometimes become lousy; but if clean, good ashes are placed where the hens can have access to them, they will dust themselves in them until the vermin disappears. A hen is a right prudish old lady, and affects great modesty in selecting her nest, and laying her eggs, always selecting a quiet, sly place, when it can be found. Improving upon this hint, fix up your boxes for the nests in a corner, and in such a manner as to keep them from sight when passing near them.

A well fed fowl is disposed to lay a large number of eggs, and they should have the material necessary to form the shell supplied to them, especially when confined. A good shelter should always be provided for hens to roost under, and suitable provision will pay in increased productiveness for all your trouble in the culture of fowls.—C. A. BEMENT, in *Country Gent.*

MADERIA WINE.—The vine which has been cultivated on the Maderia Island for nearly threehundred years, is almost entirely abandoned, the land being devoted to the culture of the sugar cane. This is owing to a disease of the grape which renders its cultivation unprofitable. Maderia wine, however, will be supplied from other sources by properly labeling the bottle.

What Every Farmer Owns.

Bayard Taylor, speaking of his farm, and summing up his compensations in view of the fact that he does not own an entire landscape, says: I own, therefore, a narrow strip of territory nearly four thousand miles in length. Truly I cannot travel to the end of my dominion; what of that?—I have no desire to do so. Above me the blue seas of air, the dark, superimposing space—all is mine, half way to the nearest star—where I join atmospheres with some far off neighbor! The clouds, as they pass over, the rain, the rainbow, lightnings and meteoric fires, become my temporary chattels. Under my feet, what hidden riches may not exist—beds of precious minerals, geodes of jewels, sparry caverns, sections of subterranean seas, and furnaces heated from the central fire! This is wealth which indeed would not be received as collateral security for a loan, but it is therefore none the less satisfactory to the imagination. Standing, once, on the lawn at Farringford, I congratulated Alfred Tennyson of his view across the Solent, to the blue, wavy outline of the New Forest. "Yes," he answered. "but it wants another feature—three summits of perpetual snow, yonder!" pointing to the northwest. "To make my landscape complete, not only those three peaks are required, (also in the northwest,) but a lake or a river in one of the intervening valleys. Until I can procure them, I construct temporary Alps from the masses of sun-gilded *cumuli* which settle along the western horizon, and flatter myself that I shall be able to see a distant river from the top of my future house. The changes of the atmosphere—the shifting of some prevailing tone in the colors of the landscape—give me, virtually, the range of many lands. My property may lie in Norway, in America, or in Andalusia: it depends upon the sky. Usually, however, it represents the midland vales of England—undulating, deep in the richest foliage, intersected with lanes of hawthorn and dotted with old stone country houses and capacious barns. The sentiment of the scenery is the same—order, peace, and home comfort."

CORN AND COB MEAL.—The startling statements about this kind of food which we published a few weeks since, taken from the *Ohio Farmer*, have brought out a flood of counter statements in that paper as well as in our own. We shall be on the look-out for all the new facts, and shall be glad of contributions to our stock.—*Homestead.*

The above subject is now being pretty thoroughly discussed. It is probable that cob meat is more profitable to feed than corn in the ear, yet we think the pure shelled corn ground is better without the cob.

—An exquisitely refined lady, who regards all words of one syllable as lacking in gentility, recently expressed the idea that her stove did not draw well, as follows: "My anthracite consumes mildly."

Dark Stables.

It cannot be doubted that *light* exercises a very important influence upon animal as well as upon vegetable economy. Every one's feelings bear witness to the stimulus afforded by its agency; a dark day or a dark room induces lassitude and repose, which is quickly dissipated by the bright sunshine. Many diseases are much more virulent in shaded situations; and the eye especially cannot long retain its full power if deprived of light. From mistaken notions on this subject, or from false economy, it is a general practice to exclude light from the stables of horses and other animals. It is supposed by many that they thrive best in the dark. Where the animal is stabled for a brief period of rest, darkness will undoubtedly favor his repose. In the season when flies are troublesome it also may be well to darken the stable to exclude them, but when animals are stabled permanently in darkness, they cannot but suffer in various ways.—The horse, especially, is very much subject to diseases of the eye, and there can be but little doubt that this tendency is increased by confining him permanently where the eye, in waking hours, is strained to an unnatural position to perceive objects around him. Horse jockeys find an advantage in the use of such stables. The animal being brought into the glare of day is confused and startled, and by his high stepping and by his high stepping and half uncertain manner, impresses a novice with an idea of his spirit and action. Even if the quiet induced by darkness may favor increase of fat, it is not conducive to muscular strength. Muscles deprived of the stimulus of light become flaccid, and the apparently high condition induced by this means is soon lost by active exertion. Men whose employments confine them to poorly lighted apartments soon lose the color and the energy of full health, and the same results follow similar treatment of animals.

Besides this, a dark stable will seldom be kept in that cleanly condition which favors full health. The "corners" will be neglected, especially if the care of animals be entrusted to the "help" who are usually content if the stable *looks* nice. When building stables, ample provision for light will cost but little more than imperfect fixtures, and in the end will be found more profitable.—*Maine Farmer.*

—Glorify a lie, legalize a lie, arm and equip a lie, consecrate a lie with solemn forms and awful penalties, and after all it is nothing but a lie. It rots a land and corrupts a people like any other lie, and by-and-by the bright light of God's truth shines clear through it, and shows to be a lie.

—The young gentleman who was kissed by two girls at the same time has nearly recovered from the collision. He is now able to sit up, and it is thought will be able to return to his business.

—To converse with spirits—lay a five cent piece on a table in a grog shop, and they'll show themselves quicker than you can say "beans."

New Use for Coal Oil.

Within a few days, some experiments made by our neighbors, have shown us that coal oil has other and valuable uses besides that of giving light. One of our friends, who was sadly troubled with fleas, saturated a cloth, and after wrapping it in another cloth, then wound around it all his dry linen as he unrobed at night, at the same time he took another cloth slightly touched with the oil, and rubbed his body; the result was a perfect extermination of the nimble little pests. Another of our friends, after trying various remedies to kill bed bugs, used coal oil; it was perfectly efficient, destructive apparently to all. As a preventive against the attack of flies on horses, a gentleman rubbed an animal a few days since with a cloth dipped in the oil, and then wrung as dry as possible; the result was that for hours the flies gave the coal oil and horse a wide berth.—*Ex.*

We find coal oil of value in bruises and lameness. Its application is at least harmless to human flesh, if it is of no value, while to the insect tribe it is sure death. A little of it sprinkled in the bottom of hens' nests we think would have the effect to drive out the vermin that infest the poultry. Ed.

—Picture of despair—a poor pig with his nose through a garden fence, almost touching a cabbage stalk.

—A little boy being asked, "What is the chief end of man?" answered "The one what's got the head on."

—An Eastern editor perpetrates the following: "A flock of sheep composed of all 'weathers,' may be said to resemble our climate."

—If a flock of geese see one of their number drink, they will drink too. *Men* often make geese of themselves.

—Three things can never agree—two cats over one mouse, two wives in one house, or two lovers over one maiden.

—A one-legged gentleman became very much excited the other day at a political discussion. He got hopping mad.

—A country editor, speaking of a blind sawyer, says: "Although he can't see, he can saw."

—No man can look on a fashionable woman's figure now-a-days and say that figures won't lie.

—Most ladies never realize the full beauty of the painter's art until they have their portraits taken.

—What miss will ruin any man? Mis-management.

What miss always makes her lover go astray? Mis-lead.

THE ILLINOIS FARMER.

BAILHACHE & BAKER.....PUBLISHERS.

M. L. DUNLAP, EDITOR.

SPRINGFIELD, MARCH 1861.

Editor's Table.

THE ADMINISTRATION ORGAN.—It has become a well settled principal that no President of the United States can do without an organ; they must have a medium through which to send out their views to the world, and in which to put out feelers to try the public pulse. In this respect Mr. Lincoln is no exception to the general rule, but in the selecting of that organ, the great Rail Splitter has shown his independence and kind regard to the industrial classes who have thus honored him as the head of the nation. And we have now the pleasure to announce that hereafter, and until further notice, the ILLINOIS FARMER will be the organ of the President, in which capacity it will give its readers, from time to time, in advance of all other sources, and by authority, his views on all important subjects touching the welfare of this great nation. Our long and somewhat intimate acquaintance with Mr. Lincoln will enable us to present his views from the true stand point. Our arrangements are such that whatever the difficulties at the seat of government, we shall always be posted. Without further parley, we will assure our readers that in future, as heretofore, the FARMER will be conducted with strict regard to its orthodoxy on all subjects pertaining to practical agriculture; that its editorials will shadow forth the policy of the incoming administration; that it will use plain language, and call things by their right names; that to prepare himself for any great conflict that may arise, the editor will inure himself to labor, that his muscles may become strong to enable him to lead on the hosts that will be marshalled in the industrial army, whose tread will be like the march of kingdoms in their progress; his plow shall glisten in the morning sun, as it turns up the rich deposit of diluvial drift of the prairie swells, and the declining sun shall find him busy with spade or pruning knife, hoe

or rake, in the adornment of his home, but when the midday sun showers down his heats, fashioning the plants into forms of beauty, he will take up the pen in defense of the Rail Splitter and his constituents. But a few days, and the new President will, from the steps of the capitol, proclaim his principles to the gaping world, and as his organ, it is no more than our duty at this early day to shadow forth his views on the subjects of the day.

It is said that charity, like a great blanket, covers a multitude of sins, or rather, it covers our modesty when we would do a good act. Kansas suffering needs our friendly aid in sending them food and seed; continue in the good work.

In the cultivation of the soil, the President would recommend that you do not undertake too much; that you lay your plans so as to drive your work instead of having it drive you. Do not, therefore, plow more than you can thoroughly cultivate, that is, do not cut off more rail cuts than you can split, for if you do, the wood will become dozy. So far as you, can you should build tenant houses for your hired help, so that they can board themselves, and thus relieve your wife and daughters from a species of vassalage; (it has been Mr. Lincoln's practice to hire by the day, thus enabling Mrs. Lincoln to spend her evenings in the parlor with her husband and the boys), on a par with house servants at the South, (don't this show that mankind is about the same North and South?) It is especially recommended to those about to sow spring wheat and oats, that there is no time to be lost, and these grains should be got in at once. Suppose the clouds should descend and open their flood gates upon us, we would be too late for a good crop. "Thrice is he armed," &c., is an old adage in the song, and thrice is he prosperous who takes time by the forelock, and thus has his work done in season. For further views of the incoming administration, we must refer our readers to other parts of the FARMER, all of which has been gotten up with the especial view of our organism.

To the President elect we return our most cordial thanks for thus freeing himself from the political newspapers of the day, compelling the immaculate Chicago Tribune, the State Journal and other ambitious papers, to mind their own business, and to trust his fame in the keeping of the masses, and to fortify himself with the regiments of the great industrial army, fully armed with the implements of their respective callings.

Come on, Democrats, Republicans, Believeretts,

and all others who wish to make progress in the culture of the soil, our platform is broad and deep and room enough for all. We invite you to send in your subscription to the FARMER, to send us short, condensed memoranda of your experience, and if you find that our views are wrong, just pitch in.

DEAR FARMER:—I hear some complaints that the agricultural journals are intended only for the rich and large farmers, and entirely overlook any thing that the poor man or farmer of forty acres should be taught, and I concur in this opinion, in regard to some of them, but I am glad I can say the ILLINOIS FARMER is an exception. My farm is only forty acres, and the FARMER tells me nearly all that I should know, and if anything is omitted, I ask the questions and soon have the desired answers. I wish to call the attention of your correspondents to this subject, so that in their articles they may not overlook the interests and abilities of the poor man, for it is the poor man and small farmer who needs help. I hope the makers of agricultural implements will also consider that these men have a claim on them, and that they should try to make their machinery, so as to come within their reach.

Yours truly,

WM. L. PROSE.

Tuscola, Feb. 20th, 1861.

The price of agricultural implements is, as a general thing, too high; but the fault is more with the credit system than anything else. When manufacturers sell for cash, they can sell much cheaper, and if the farmer only buys as he can pay, he will make a large saving. The small farmer cannot afford to get into debt, better do with less than to load himself down with interest.

The large farmers have lost largely in a too liberal purchase of labor saving machinery, without housing and protecting it from the weather. The same principle that will apply to the small farm will also apply to the large farm, but too often the large farmer depends more on the quantity than the quality. Capital against skill and industry.

EDITOR FARMER—*Dear Sir*: I take so many papers that I thought I would not renew my subscription, but I find that I cannot do without it, and the boys will not, so you will please have it continued, and oblige

L. W. P.

We have mailed your subscription to the publishers, and it will be continued accordingly. That is just what we have been aiming at, to make the FARMER a necessity, so that no farmer can afford to do without it. Here is another letter from a subscriber:

EDITOR FARMER—*Sir*: I seed one of your papers at the post Office tother day, and i seed a right smart of big things about farming in it. Now, you fellers up north think you can rite cute. i warnt you to send me your paper so i can see what orful stories you can tel. I send you 4 bits.

JOHN OTT.

N——a, Feb. 16, 1861.

We hope John will be pleased with the paper, and at the end of six months send the publishers four bits more, or get up a club of twenty, when your change will do for the year. If you will read the FARMER, John, you will not be sending north after potatoes, and other such luxuries, but grow them yourself.

ST. CLAIR NURSERIES.—We are in receipt of the catalogue of these nurseries, Messrs. Babcock & Bro., proprietors. They have a fine stock now ready for their customers. Their selection of apples for the south part of the State is good, and if the farmers of that section will but consult their own interest, they will plant largely from this establishment, nor will they send east for trees unsuited to the soil and climate of that fine fruit region. The Red Astrachan, Benoni, and Early Harvest, for summer; Maiden's Blush, Famous and Rambo for fall, and White Bellflower, Green Bellflower, Golden Russet, Yellow Bellflower, Jonathan, Little Romanite, Newtown Pippin, Winesap, will make out the list, but if this is not satisfactory, they have a hundred or more sorts to select from. This catalogue embraces a large list containing thirty-two pages. Besides, the list of fruits, it contains a large number of valuable suggestions to the planters. These nurseries rank scarcely second to any in the State, and to Egypt is especially valuable. See their advertisement in another part of the paper.

THE HOUSE AND GARDEN.—This is a new work published by Thos. Brown, of the *Ohio Farmer*, but we have not had the pleasure of seeing it. Can you send us a copy, friend Brown?

IMMIGRATION.—The improved condition of our industrial interests is beginning to have its effect in the demand for farming lands, while unimproved village property is at a discount. There is springing up a fair demand for new farms, and with this there comes a growing disposition among the holders of improved farms not to sell, and we can safely say that at no time in the history of the State is there so few farms for sale as at the present. At the same time there is no lack of wild lands offering. The railroads have so cheapened fuel and fencing that wood lands are held at more reasonable figures, and a more ready disposition is manifested in their sale. Monopolists of timber lands have found that the effects of the iron rail have made serious inroads into their capital by depreciation. Iron wire has proved a good material for fencing, and at six cents a pound, fence wire will only cost thirty cents a rod, which, with two posts at eight cents each, and four cents a rod for putting up, and we have a good, durable and substantial fence for all large stock, at only the cost of fifty cents the rod. The Illinois Central is making large sales, and what is the most noticable, people only purchase what they want for immediate cultivation, the average being below eighty acres each.

The day of speculation is passed, and now we can make substantial progress. Many immigrants to Kansas, Nebraska, Minnesota and even Wisconsin, have returned to make homes on our prairie slopes. The advantages of our State in the ease of culture, the abundant crops and market facilities are beginning to be appreciated, both at home and abroad. The effect on the farmers at home is to remain, when they come from abroad to locate among us. As a general thing, unimproved lands are held at too high rates, but for ready cash, sales are made at very satisfactory prices. From the fact that the I. C. R. R. is making such large sales, it argues that they are selling at reasonable rates, and giving long time. Should the breach between the North and South continue, the Northwest cannot fail of being benefitted, as an interruption of trade at New Orleans will send the vast inland trade of the river northward. The worst fear that we have is, that it will hold out false inducements from its temporary position, for the Gulf States cannot long continue under such a state of things. We may look for a large immigration from the South, more especially from Tennessee and North Carolina, as thousands from those States have relatives already settled here. Under any aspect of the present condition of things, we can look

out with high hopes of continued prosperity. Away from the immediate scene of strife, if such should unfortunately come, our farmers can supply the breadstuffs for those engaged in a more beligerent attitude. With us cotton can never be king, nor sugar our master. With wool, flax and cotton of our own growing, we will never be obliged to submit. The sorghum will give a sweetening, and whether the duty is taken off of sugar or not, we shall soon be a comparative small purchaser. With such advantages as these, it should be no wonder that our State has been and continues to make such progress, and her bonds from being a drug at sixteen cents on the dollar, now above par. With the great lakes on the one hand, and the Mississippi on the other for an outlet, we can add carriage and beat the world in cheap grain. The passage of a homestead bill, and the building of a Pacific Railroad will make a new demand upon our agricultural resources, and our farmers may, therefore, have no fear of the want of a market for their products.

BROOM CORN SEED.—Broom corn seed of superior quality is not always easily obtained, as planters are well aware, and as the difference in the quality of the brush has an important bearing on the price, it is well to get good seed. Last fall we saw a field of three hundred acres, all the brush of which passed No. 1, and netted the grower about one hundred dollars a ton. He attributed much of his success to the excellent quality of the seed. We saw another field that sold for thirty dollars a ton; the owner laid the fault to the poor seed, to which may be added, poor culture.

BROOM CORN.—This has now grown into no small importance as a crop, and thousands of acres are grown. The demand is steadily increasing. Large shipments of it were made last season to England and other ports. Larger preparations have been made than before for the next crop, and nearly double the quantity will be planted. In the August number of last year. we gave full details of the culture, which is simple, and comparatively inexpensive compared to the old process. The brush must be fine, long and straight, otherwise it will not command over half price, and will not pay. The difference between two and four dollars per hundred pounds is no small item, especially when six hundred pounds is an average crop per acre.

HON. M. L. DUNLAP—*My Dear Sir:* In reply to your inquiries, would say that "Thorburn's Early June" Potatoe was purchased of James M. Thornburn & Co., New York, (among a collection of early sorts,) as early June. I prefixed the "Thorburn's" to distinguish it from other "Junes." My planting is usually done after the hurry of nursery work is over, and hence I was not *very much* disappointed that it was not ripe at the time of digging. Subsequently on planting early I found it continued to grow late, being very productive, of large size, white flesh and good flavor, resembling the Carter, though perhaps not quite so good. As it keeps well it may be used the *next June*, and perhaps in this way still be entitled to the name of *June*.

Among the sorts sent you with above, was an early one, which I trust has proved as valuable in your section as it has done here. I refer to "*Mathews' Early Blue*." It is proving with us the best very early variety in cultivation, combining more good qualities than are to be found in any other very early potato. In form it varies from round to long, skin pale blue, flesh white, cooking dry and mealy, good size for an early potato—never known to rot.

Among late sorts the "Garnet Chili" stands first. This is a seedling of Rev. C. E. Goodrich, of Utica, N. Y., from the rough purple Chili, of large size, roundish, skin reddish, nearly smooth, flesh white, cooking dry and mealy, exceedingly productive and free from disease. If you have not this sort, will send you some for trial.

A. G. HANFORD.

Waukesha, Wis., Feb. 8, 1861.

The "Thorburn Early June" is so nearly identical with the "Carter" that nearly every person has pronounced them genuine, but the flesh is a yellowish white, and the eyes not quite so deep. They are second to the Carter for eating, but being so very productive, we shall continue their culture. The "*Mathews' Early Blue*" is most decidedly the best early potato that we have seen. Last spring we threw the "Early June" out in favor of this potato; it is rich, firm and mealy, ripens so early that we cannot reasonably ask for a better; it yields better than the Early June.

We are glad to hear that our friend Hanford has a small stock of these to spare. We had thought of getting up a stock of this variety to send out next spring, but we have divided them out among our friends so liberally that our stock is not much beyond our own wants.

We have another variety sent us by our friend

H. The Early Manly, which comes in next after the Blue, is more productive; it is a week ahead of the Neshanick. We grow from ten to fifteen acres of potatoes annually, and have had experience with a large number of varieties. We have planted the Neshanick, or Mercer, the most largely, as it always proves saleable, but we shall pay it less attention the coming season. We have not tried the Purple Chili, but shall do so this season.

We can recommend the Matthews' Early Blue, Early Manly and Neshanick for early; Neshanick and Carter for late. Matthews' Early June would pass as first rate was it not for the yellow tinge of its flesh, yet we think it will prove rather popular from its vigor and great yield, beating the Neshanick three to one. Mr. H. has had a large experience with the new sorts, and after winnowing out the chaff, has come to the real grain. The potato rot has given a wide field to humbug, and we would now advise our readers to be cautious, and hold fast to that which is good. We have nearly twenty new sorts on trial, and shall report them as soon as we reach the points.

SWEET POTATOES.—We would call the attention of nurserymen and others to the Card of Mr. Allen, in regard to sweet potatoes. Mr. A. was among the first, (formerly of the firm of Tenbrook & Allen), to discover the value of large, well-grown tubers for seed. We had a lot of him three years since, and found them of excellent quality. The location of Mr. Allen is a good one from which to get seed.

We would call the attention of all interested to a worthless variety sometimes palmed off for the Nansemond—the Northern Yellow. Those who purchase plants are more liable to get bit with these. As a very early variety, they have some value, but who would think planting the Early June for a main crop among the Irish potatoes.

THE FARMER THE TRUE ARISTOCRAT.—N. P. Willis, of the *Home Journal*, says:

"The star of the farmer is on the rise. To be a distinguished man now-a-days, there is no safer or more substantial way than to be an eminent agriculturist, successful horticulturist or the like—a Longworth, a Wilder, a Grant, a Johnson, a Dunlap. There is no way for a man to be "looked up to," for the next half century, like being an enterprising and successful farmer, and there is certainly no way to pass life so pleasantly, no vocation so sure to keep him company till he dies."

GANG PLOWS.—We, the undersigned committee, appointed by the Illinois State Agricultural Society to examine the plows upon trial at Decatur on the 10th and 11th November, 1858, report that we have examined the Gang Plow and Seed Sower invented by Joel Lee, of Galesburg, and in our opinion it is an improvement on most other similar plows, and we believe it is worthy the attention of farmers generally.

We have also examined the gang plow manufactured by C. H. Dawson, of Jacksonville, and pronounce it a great improvement on the old single plow in common use.

We also examined the single plow with wheels, manufactured by H. Prather, of Decatur, which we think will be valuable for deep plowing, and and for foul ground.

S. M. PARSONS,
EZRA T. MARQUISSE,
F. T. MAY,
T. B. HAPPIN,
D. S. STAFFORD.

Decatur, Nov. 11th, 1858.

The above committee was appointed by the State Agricultural Society at the trial of the Fawkes' steam plow at Decatur, in November 1858. Since that time we have heard little from gang plows. We have great faith in the single plow on wheels, and it is possible that two plows may be so arranged that they may do good work. The pressure on the bottom of the furrow, as with our common plow, is very great, and it appears to us that wheels could be used to good advantage to relieve this friction; with this improvement, we have little to expect of our present plows, which to our mind are about perfect. The wheels can be rollers to pulverize the fresh turned soil, for at that time the lumps are easily crushed, but let them become dry, and it will require a large pounder. Prof. Turner has been turning his attention in that direction with very promising results.

BROOM CORN SEED.—We would call the attention of broom corn planters to the card of Mr. Powell. Mr. P. had a fine crop on a hundred acres, grown on the open prairie, without any fence, six miles west of our home. The land was purchased of the I. C. R. R., and has paid a handsome profit on the investment. In the same neighborhood large fields of corn were grown without fence, the new settlers keeping their small amount of stock in pastures, thus saving a large outlay for fencing. Here was some two thousand dollars worth of broom corn taken off of one hundred acres, that only cost the culture.

A MOTH TRAP.—Since writing the notice of a moth trap for the last number of the FARMER, we have received drawings of it from the inventor at Springfield, and from what we can gather from them, we have the promise of a veritable practical trap for that destructive insect, the *bee moth*. It has the merit of simplicity and cheapness, but as insects do not always follow out the plans of inventors, nothing short of a trial will show whether it is within the range of their instincts. If this should prove to be so, we may soon count on cheap honey. The inventor did not state whether it had been put to the test, but has the favorable opinion of several bee men of the neighborhood. We have long distrusted our own opinion on all these matters, and must beg to fall back upon the true test—a trial. Aside from this, we can but hope that this thing will work to a charm; it strikes us so favorably that we shall feel disappointed if it does not succeed.

METEOROLOGICAL SPECULATIONS—*Editor Chicago Tribune:* On the 10th inst. there were a succession of showers having all the appearance of summer rains; and in the evening, flashes of lightning from distant clouds followed each other as often as once in fifteen minutes for more than three hours. Yesterday, the 11th, a flock of wild geese passed on their way north, flying very high; and to-day, the 12th, the birds make the woods vocal with music. It seems like the 1st of April.

This is unusual at this season in this latitude; but by referring to the Army Meteorological Reports, I find that the season, as there reported, was much as at present. From other sources I learn that the summers of 1833, 1840, 1845, and 1854, were distinctly marked dry seasons in all the Southern States east of the Mississippi river, except Florida.

From these and other facts I am led to believe that the alternating wet and dry seasons of this country are governed by fixed laws of periodicity, and that the period is septennial. If my conclusion is correct, a season of great drouth may be expected in the South during the present summer.

I wish to attract the attention of the public mind to this subject, not to provoke discussion, but to turn thought in this direction, so that science may be enriched by the observations of the masses anxious to know the truth. Hoping that a large army of observers will be brought into the field.

I remain very respectfully yours,

C. B. REED.

Eight Miles from Decatur, Ills., Feb. 12, 1861.

Well, we think the weather is a little uncertain after all. We have not been able to detect these cycles of weather for the past twenty-four years.

Ed.

COLOR OF FRUIT.—The pears exhibited by Dr. Boynton, at the late meeting of the American Pomological Society attracted much attention, from the unusually waxy and glossy appearance of the skin, and the extraordinary brilliancy of the coloring. Dr. B. offered to the Society, in some extended remarks, his idea of the probable cause of this color and gloss of the skin, but no correct report has yet been given of those remarks in any of our journals. The chief idea was, that the effect above noticed was produced by growing the fruit upon a soil containing a great variety of mineral or inorganic substances, and by free use of superphosphate of potash, soda and the common carbonate of lime, which, acting upon the silicate, produced the silicate of potash, the silicate of soda and lime in abundance, and thus coated a covering upon the pears similar to the silicious coating on the corn stalk. On this dense surface the rays of the sun pencil the prismatic hues with a degree of brilliancy and perfection rarely witnessed.

The Doctor thought it not impossible that he could so perfect his metallic coating that he could at some future meeting present his best specimens of fruit with his own photographic portrait on the other side.—*Horticulturist*.

Dr. Boynton is a bit of a wag, as we well know from a personal acquaintance, and has made a splendid sale of "silicates" and "metallic substances." Bah! why, we had a splendid lot of pears from New York at our late State Agricultural Society, similarly coated with "silicates," but they attracted no great attention, and we suspect that the Doctor has been stealing thunder instead of manufacturing it himself. We don't say what was the composition on those pears, but we will bet two cents that a penny's worth of gum arabic dissolved in water, make a thin solution, dip in the pears and wipe dry with a cotton cloth, will bring out the colors wonderfully, and make a beautiful coating of "silicate of potash like that on the corn stalk." We tender the above to the American Pomological Society without charge, with the privilege of taking out a patent if they choose.

THE WISCONSIN CHIEF.—This staunch temperance sheet comes to us from Fort Atkinson, Wis., with all the freshness of spring. Pleasant and yet sharp are the pens of T. W. and Emma Brown; sharp when they wage war with the *hydra*, and pleasant when they discourse of less sinful subjects. This paper has a large circulation in our State, and the senior editor has a large array of friends hereaway. Hear him on shade trees:

The Southern Cayuga Union Agricultural Society have offered a prize of \$5, \$2, and a diploma for the greatest number of shade and orna-

mental trees to be set out in the fall of 1860, and spring of 1861, which shall be alive on the 1st of September, 1861.—*Recorder*.

It would seem that some society in this locality had offered a premium for *cutting down* shade trees, instead of setting them out. The oaks by the M. E. Church have not only been cut down, but the fine one in front of Chester May's, girdled. Such taste ought to win a leather medal.

It would appear that even away up north, folks will be folks:

We never saw two put ten thousand to flight but we have seen two hold several hundred in check, and with the most apparent ease. They take a strong position in the church door after service, and commence "visiting." The whole crowd has to wait until all questions are asked and answered, and each invited to "come up" and see the other, at least fifteen times.

If we were a military man and wanted to take a strong position, we should station two of our females in the church door. No enemy could ever pass and get through the natural size.

Well, friend Brown, if Ft. Atkinson should be invaded by the Fire-eaters, just station one of your churches in the line of march and you will be safe.

CORN—MUD.—But little corn was brought to town last week, on account of the muddy roads. The farmers were afraid to venture out with their teams, for fear they would go down so deep that they would not be able to communicate with their friends living and remaining on the earth! We cannot but regard such an exhibition of caution on the part of our farmers as highly commendable. They are all right on the mud question.—*Champaign Union*.

ILLINOIS CENTRAL RAILROAD.—The Illinois Central Railroad is doing an immense business in freight. Every station along the southern division is full of freight, and although the Company have all their rolling stock, (about 2,500 cars) in use, besides a large number from the Terre Haute & St. Louis, and Great Western Railroads, they cannot meet the demands on them. From eight to fifteen heavy trains, loaded with corn, flour, &c., for the south, pass down daily.

TO CORRESPONDENTS.—We must ask of our correspondents that they write only on one side of the paper. When both sides are written on, it sometimes puts us to inconvenience in making corrections, and is always inconvenient for the printer.

DU PAGE COUNTY NURSERIES.—Messrs. L. Ellsworth & Co. present the readers of the FARMER with an attractive list of trees and plants in this number, not only attractive in quality and quantity, but in the extremely low price. With such announcements as these and others in our paper of this month, we hardly think many of our readers will be seen buying New York exchange and waiting until the season is far advanced for trees, delayed by transportation. Send for a catalogue or order at once.

Rock me to Sleep.

Backward, turn backward, oh Time, in your flight,
Make me a child again, just for to-night!
Mother come back from the echoless shore,
Take me again to your heart as of yore—
Kiss from my forehead the furrows of care.
Smooth the few silver threads out of my hair—
Ove my slumbers your loving watch keep—
Rock me to sleep, mother—rock me to sleep!

Backward, flow backward, oh, tide of years!
I am so weary of toils and of tears—
Toil without recompense—tears all in vain—
Take them and give me my childhood again!
I have grown weary of dust and decay,
Weary of flinging my soul's wealth away—
Weary of sowing for others to reap;
Rock me to sleep, mother—rock me to sleep!

Tired of the hollow, the base, the untrue,
Mother, oh, mother, my heart calls for you!
Many a summer the grass has grown green,
Blossomed and faded—our faces between—
Yet with strong yearning and passionate pain,
Long I to-night for your presence again!
Come from the silence so long and so deep—
Rock me to sleep, mother—rock me to sleep!

Over my heart in days that are flown,
No love like mother-love has shone—
No other worship abides and endures,
Faithful, unselfish, and patient, like yours,
None like a mother can charm away pain,
From the sick and the world weary brain;
Slumber's soft calm o'er my heavy lids creep—
Rock me to sleep, mother—rock me to sleep!

Come let your brown hair, just lighted with gold,
Fall on your shoulders again as of old—
Let it fall over my forehead to-night,
Shading my faint eyes away from the light—
For with its sunny edged shadows once more,
Happily will throng the sweet visions of yore,
Lovingly, softly, its bright billows will sweep—
Rock me to sleep, mother—rock me to sleep!

Mother, dear mother! the years have been long
Since I last hushed to your lullaby song—
Sing then, and until my soul it shall seem
Womanhood's years have been but a dream;
Clasped to your arms in a loving embrace,
With your light lashes just sweeping my face,
Never hereafter to wake or to weep—
Rock me to sleep, mother—rock me to sleep!

EGYPTIAN NURSERIES.—Our friends in South Illinois will do well to look over the list of this nursery, and they will be repaid with a fine show of valuable plants, besides the usual stock of fruit trees.

—Why is a retired carpenter like a lecturer?
Because he is an ex-planer.

SPECIAL NOTICE.—For terms see prospectus on last page. All exchanges and communications for the eye of the editor should be directed to ILLINOIS FARMER, Champaign, Ill. Electrotypes and business matters, and subscriptions, to the publishers, Springfield, Ill. Implements and models for examination should be sent to the editor. The editor will, so far as it can be done, personally test and examine all new machines and improvements submitted to his inspection. He will be found at home, on his farm, nearly all of the time. So far as it is possible the conductors on the I. C. R. R. will let off passengers at his place, which is directly on the road, three and a half miles south of the Urbana station, now the city of Champaign. tf

SPRINGFIELD NURSERY.—Messrs. Hood & Co have entered the capital of the State and propose to adorn and beautify, not only the city, but the adjacent country with the useful and the beautiful. Our Springfield friends are rather enthusiastic planters, but they have been badly sold with French roses and other foreign fixings, and we are pleased to see that they can find something at home well worth their attention. Give the new men a thorough trial and we trust you will not repent it. You cannot be worse off than with itinerant tree and plant pedlars and bogus nurserymen who squat down for a season's sale.

THE GROVE NURSERY.—The old Doctor has probably some of the most superb evergreens to be had in the State. He took the first premium last year on the best acre of young forest trees, and to do this must have had fine trees. The Doctor is the oldest of the northern nurserymen, and his grounds are rich in rare and valuable trees and plants.

WOODBURN NURSERY.—Our friend Huggins keeps on in the even tenor of his way in supplying the planting public with a superb assortment of stock. Mr. H. is a thorough cultivator, and a close observer, and will make you good selections for the orchard, besides, he sells cheap when you consider the fine trees and plants that he sends out.

CHESTER WHITE PIGS.—We have inquiries in regard to this breed of pigs. They are for sale by our S. A. Bushnell. See his card.

THE LUMBERMAN'S ADVERTISER—A weekly price current, by Nat. A. Haven, editor and publisher, Chicago, will be found useful to all using any quantity of lumber. We discussed the lumber question in the January number, and until country dealers will take a reasonable course, we shall recommend our readers to make their purchases in Chicago. Last week we purchased a car load of lumber at a saving of three dollars on the thousand feet, and at the same time got a better article. Our country dealers have a way of selling all their culls with the common lumber, and it would take a large premium to enable you to find a cull, rated as such, among the lumber piles of our village dealers.

Terms, \$1 per annum.

Fencing is quoted at	\$11
Common boards.....	10
Culls.....	8
1st clear.....	28
2d "	22
3d " plank.....	18
3d " boards.....	15

THE HORTICULTURIST FOR FEBRUARY is at hand, and a valuable number. Grafting the Grape, Spring Hot-beds, Grapes, Shade Trees, each are ably discussed. The *Jagged Leaved Blackberry* is up for sale. The West has had enough of the *Lawton*, and won't bite. If any one should want this fine fruit, we can inform them where they can be had in our own State for the cost of digging the roots and shipping. We will say the fruit is valuable, but do not know how they will do in the open garden on our prairies. We have several plants now well established which should fruit the coming season. Perhaps our people will know it better under the name of *Trailing Blackberry*. We shall be happy to forward subscriptions to the *Horticulturist*; \$2.25 will pay for one copy of that and the *FARMER*, and \$4 for two of each, for one year.

SILVER MAPLE SHADE TREES.—We have a large stock of this most valuable of all our shade trees, from four to six feet high, which we sell at five dollars a hundred, and a few hundred six to eight feet high at ten dollars per hundred.

THE VEGETABLE GARDEN.—In the next number we shall give considerable space to the vegetable garden. Our readers in the central part of the State need a little stirring up on this point. The cellar and the vegetable garden are two very important institutions on the farm—great promoters of health and comfort. It is now time to look after the hot bed.

JOHN COOK'S NURSERY, CINCINNATI, O.—Mr. Cook presents the readers of the *FARMER* an extensive list of nursery stock. We visited his grounds last summer, and found him one of the most thorough culturists that we have seen. Mr. C. practices the heading back system, and thus grows the most straight and symmetrical trees that we have seen anywhere. Of this system we shall have more to say as the season progresses. Trees grown at Cincinnati have given excellent satisfaction in the central and south part of the State, and in the list of Mr. C. will be found desirable articles for all parts of the State, and the Northwest. The new kind of Silver Poplar is quite an acquisition, and much superior to the old.

TO ADVERTISERS.—It will be seen by the rates of advertising in the *FARMER*, that they are put at an exceedingly low rate. This will give all parties who have articles to sell, to reach the readers of the *FARMER* at a cost that cannot fail to prove profitable.

Our nurserymen will see that it is to their interest to patronize the *FARMER*, if they would make sales at home. The manufacturers of implements cannot afford to loose such an opportunity. Now is the time to look to your interests. Our farmers are in want of various goods, wares and merchandise, and they would like to know who will best serve them. When practicable, the prices should be attached.

ILLINOIS AND INDIANA.—The aggregate population of Illinois is 1,791,238, and that of Indiana 1,347,005—giving to Illinois over Indiana a population of 344,238. The area of Illinois is 55,410 square miles, and that of Indiana 33,809 square miles, making an excess for Illinois of 21,591. The population per square mile is a fraction over thirty for Illinois, and a fraction over 39 for Indiana, showing that, while Illinois has a greater aggregate population, it is considerably less in population to territory than that of Indiana. In the last decade the increase per square mile has been a fraction over 10 in Indiana, and a fraction over 15 in Illinois. Relatively, the population of Indiana is greater than that of Illinois, and will likely remain so, as the causes which have operated during the past ten years to develop Illinois, will not influence its growth so much in the present decade.—*Ex.*

THE MARCH No.—We hope our readers will appreciate our labors in this number of the *FARMER*. They will find in it a large number of practical facts, which, to gather and put in shape, has taken no small amount of labor, and with this paragraph, we commit it to our readers.

Publishers' Special Notices.

AGENTS.—We do not appoint any agents; all are voluntary. Any person so disposed, can act as agent in any place.

ENLARGE YOUR CLUB.—Will not the friends of the ILLINOIS FARMER inquire how many copies of the FARMER are taken at their respective offices, and pass around among those who ought to have their names added to the list? Our terms are so low to clubs of ten and twenty that we ought to have one or the other made up at every office in the State, and at every office in Central Illinois, one of twenty or more. Will our friends, and the friends of practical agriculture see to it, and thus lay us under renewed obligations?

TO SINGLE SUBSCRIBERS.—You receive the only copy of the FARMER that goes to your post office. Can you not send one, two, three or more new subscribers, without any trouble? Try. Sample numbers, &c., sent free.

DRAFTS.—Those remitting us large amounts of money, will please send us drafts on Springfield or Chicago, less the exchange. If you send cash in a letter, be sure that is well sealed and well directed, to Bailhache & Baker, Springfield, Illinois.

THE FARMER AS A PRESENT.—Any of our subscribers who wish to make a present of the ILLINOIS FARMER for 1861, can have it at the lowest club rates, when sent out of the State. For fifty cents you can treat your eastern friends to a western agricultural paper. In no way can you invest that amount to so good advantage to emigration.

SEND NOW.—Any person who remits pay for a club of ten or fifteen, or any other number at the specified rates for such clubs, can afterwards add to the clubs, and take advantage of the reduction. Thus a person sending us five subscribers and three dollars, can afterwards send us three dollars more and receive six copies.

TO THE CASUAL READER.—This and other numbers of the ILLINOIS FARMER will be sent to many persons who now see it for the first time. Will they not examine it, and if they like it, subscribe for it, and ask their neighbors to subscribe? Sample numbers, prospectuses, etc., sent free to all applicants. See terms elsewhere.

HOW TO OBTAIN SUBSCRIBERS.—The best way is to send for sample numbers. Any young man by canvassing his neighborhood, can easily make up a club of five, ten or twenty, but no time should be lost in doing so, for your neighbors may send east for their paper which, though val-

uable there, is much less so here, the difference of soil and climate putting them out of their reckoning when attempting to teach us western farming.

HOW TO HELP.—The friends of the ILLINOIS FARMER will find a prospectus in another column. We desire to suggest a few ways in which they can use it to advantage. 1. Show the FARMER to those who are unacquainted with it, and tell them what you think of it. 2. Send for prospectuses, and put them into the hands of those who will use them, and place posters where farmers will see them. 3. Get postmasters interested. They see everybody, and are efficient workers. 4. Send us the names of persons in your town to whom we can send prospectuses and sample numbers. 5. Begin now, before the agents of eastern papers get up their clubs. This last hint is especially important. Let us hear from you soon. See terms elsewhere.

~~18~~ Clubs may be composed of persons in all parts of the United States. It will be the same to the publishers if they send papers to one or a hundred post offices. Additions made at any time at club rates. We mail by printed slips, which are so cheaply placed on the papers, that it matters little whether they go to one or a dozen offices.

~~18~~ Correspondents will please be particular to give the name of the post office, county and State.

~~18~~ Specimen numbers will be sent gratis, upon application

~~18~~ Address

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mar2t

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Apple,	Nectarines,	Blackberries,
Pear,	Apricots,	Strawberries,
Peach,	Quince,	Gooseberries,
Cherry,	Shade Trees	Cranberries,
Plum,	Currants,	Raspberries, etc.

Grape Cuttings and Cuttings; also, a large stock of Green House Plants, Evergreens, Deciduous and Ornamental Trees and Shrubs. The following stock is on hand and for sale to the trade at extremely low prices:

- 150,000 one year old apple;
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- 80,000 three " "
- 10,000 one " peaches;
- 2,000 Cook's seedling "
- 5,000 three year old plums;
- 10,000 two " "
- 10,000 one " "
- 20,000 one and two year old dwarf pears;
- 10,000 " " " stand "
- 50,000 " two and three year old orange quinces;
- 15,000 silver poplar, (new kind);
- 12,000 Lombardy poplar;
- 12,000 weeping willow;
- 8,000 silver maple;
- 100,000 strawberries in varieties;
- 50,000 raspberries " "
- 50,000 currants " "
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- 50,000 one and two year old asparagus;
- 10,000 rhubarb, in varieties;
- 150,000 Ohio Prolific, and Houghton Seedling gooseberry;
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- 300,000 grape cuttings;
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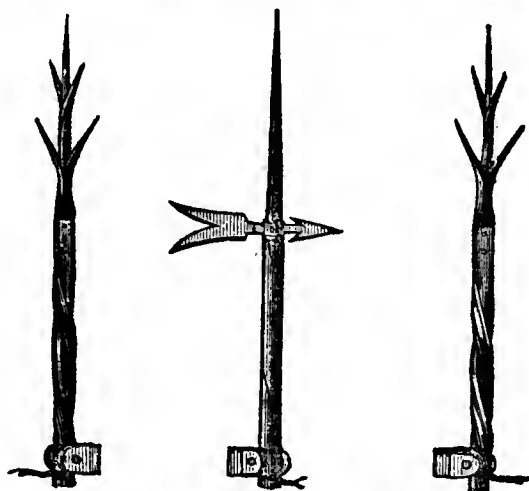
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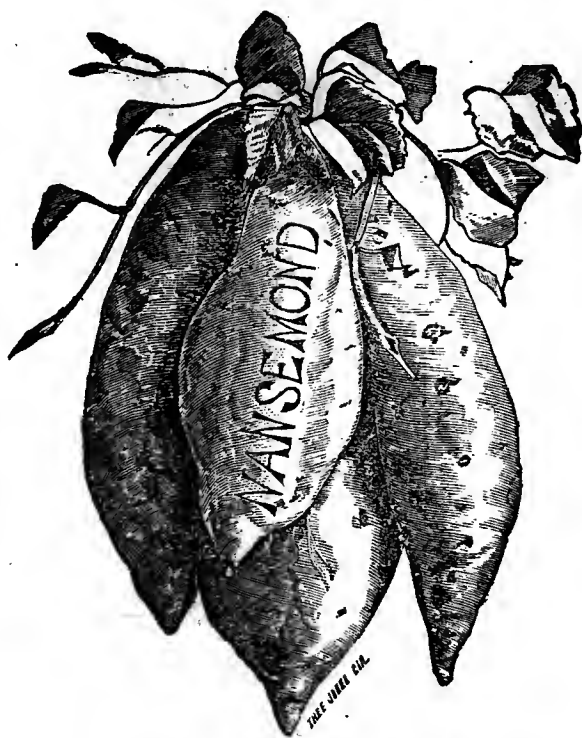
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THE SWEET POTATO CULTURIST, giving full directions for Sprouting, Planting, Cultivating, and Keeping, will be furnished gratis to Agents and Customers; and to others by mail, *post paid*, for twenty-five cents in stamps. Address,

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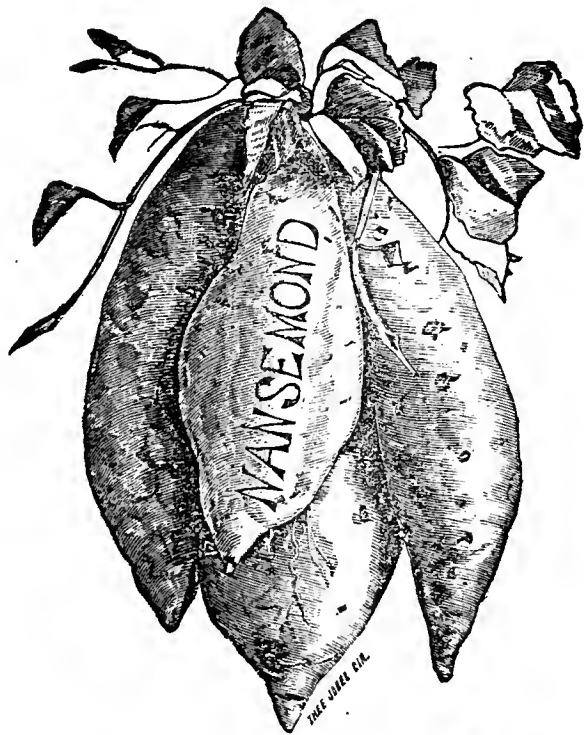
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A MONTHLY JOURNAL OF

AGRICULTURE & HORTICULTURE.

IS PUBLISHED AT SPRINGFIELD, ILLS.,

BY BAILHACHE & BAKER,

AND IS

EDITED BY M. L. DUNLAP,

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THE ILLINOIS FARMER.

VOL. VI.

SPRINGFIELD, APRIL 1861.

NO. 4.

April.

We like to write of April, for then we greet the first budding of Spring, and are pleased with its first flowers. If we were in Egypt, March would be the favorite, for while we are writing this, the peach is covered with a gorgeous livery of bloom, and the hill sides are teeming with vernal flora, but with this unusual cold weather we tremble for the fruit crop of that region. With the ground frozen over three inches deep here in Central Illinois, surely they must have frost two hundred miles south of us, yet they can lose half the blossom buds and have more than enough for an abundant crop.

To-day is the 20th of March, and the snow lays in thin patches, and the ground is frozen full three inches deep. Our sowing of spring wheat of the last two days of February is sprouted an inch, and a few warm days will bring up; that sown the 13th is only swelled. The weather has been cold and backward, freezing nightly two to three inches, and thawing out during the day, which will severely try the winter wheat. Had the weather been attended with drying winds, it would have proved more disastrous. On the dry upland the soil is little disturbed by frost, but in all moist locations we have never seen it so badly thrown up; hedges and fruit trees in such places are badly injured. In a depression that runs through our garden plat of three acres, and extends into the nursery, in some parts of which the water stood on the surface, and in others within three or four inches of the surface, in digging a small

hole; we cut a drain of two and a half feet deep early this month, and put in tile. The result is, that the heaving of the soil has been arrested as fully as on the dry upland, while a large stream of water continues to be discharged from the drain, though only five hundred feet in length. Not half of the spring wheat is yet sown in this part of the State, while at the north no attempt has been made in that direction.

In the warm afternoons the farmers are after fruit trees, many of them having fitted their grounds last fall. This shows a growing disposition for fruit, and at the same time presents the pleasing aspect of home making.

The selling out mania is past, and our farmers are becoming content; for, notwithstanding the dolorous complaint of hard times, the country has made substantial progress, and the farmers are richer to day than in the spring of 1857, before the crash of banks and the prostration of trade. We have become industrious, economical, and more moral; there has been, it is true, a large winnowing of chaff from the wheat, while the chaff is no worse, the wheat is all the better for the winnowing. The curse of too much land has been pretty well eradicated, and in its place comes a desire for better culture; worthless agricultural implements have been discarded, and the more valuable ones retained and better housed. We look back over the past four years with no particular regret, for with its trying ordeal it has brought forth bright days of promise, while we shall now be all the better capable of appreciating its value. It has taken off the artificial—the glare of show—and given us

the real—the love of home and its more substantial enjoyments; and now when the April showers swell the buds and send forth the flowers, let us go forth with cheerfulness and plant freely, that the summer may grow and ripen an abundance for the autumn gathering, to make glad the winter.

The Normal University.

It is with no small degree of pleasure that we observe the passage of a bill through our Legislature appropriating the back interest of the University fund to this Institution, amounting to \$98,956, and applied as follows:

Sixty-five thousand to the paying of indebtedness, and the remainder to form a part of the original fund. This will place this Institution beyond a peradventure. The grounds of the University comprise some one hundred acres of excellent land; and as the Institution will now be out of debt, with an ample fund, we hope the Board will lose no time in applying a portion of the local subscription to the ornamenting and beautifying of the grounds. The people of Bloomington have contributed liberally, and it is no more than an act of justice that the property thus donated should be so cared for as to be the pride, not only of the donors, but of the tax payers of the State. Let a portion of this fund be used in the planting of timber belts, hedges and fruit trees, both large and small.

The necessity of timber belts is now conceded, and let the State set an example. The Silver Leaf Maple was decided to be the most valuable for this purpose by the State Horticultural Society, but we would not be confined to this alone, but set out others—short belts—to show how they will flourish on the prairie. An abundance of the most thrifty maples and other timber trees can be had at the nurseries near at hand, and if we are rightly informed, these nurserymen have subscribed liberally to the University.

We hope they will have an opportunity to show their skill in selecting, planting and cultivating. Specimens of this kind, if well attended to, will be worth thousands of dollars to the State, and can be pointed to as living samples of what can be done.

We would suggest to the Board to at once plant a belt of the Silver Maple around the tract. We do this for two or three reasons, the maples will grow rapidly, and they can be had of good size and at low prices, within a short distance of the ground, and the cost and risk of shipping will be avoided. They can be planted this spring, and by mid-summer, will make a fine appearance. In the meantime the land can be fitted and other trees engaged for cross belts, and screens of both deciduous and evergreen trees. We shall be pleased to show any of the members of the Board our young hedges and belts of Silver Maples, when they can judge of their value.

AN AGRICULTURAL DEPARTMENT.—We have been looking forward for some years to an Agricultural Department to be attached to the University. In case this should be done, the tree planting will be in good taste, and give well protected grounds within which to make experiments in practical agriculture.

HORTICULTURE may also claim a share in these grounds, and that too will need the kindly influence of the sylvan girdle. We know our friend Prof. Hovey is a lover of trees, and we trust the Board will assist him in laying the first foundation of rural beauty on the Normal University grounds, in the planting of belts of living, waving wood.

—It is the opinion of the doctor that the lawyer gets his living by plunder, while the lawyer thinks the doctor gets his by "pillage."

—Pat thus gave his testimony in a riot case: "Be jabers, the first man I saw coming at me was two brickbats."

—A provident Irishman is going to get his life insured, "so that when he dies he can have something to live on, and not be dependent on the cold charities of the world as he once was."

Draining.

The subject of draining has as yet been little discussed, though a large amount of talk has been had over it. The mole-drain has been extensively tried and to some extent proved valuable. In all stiff clays, when the descent is uniform, they have given good satisfaction, but in the more loose soils, in marshy and sandy sloughs, have proved of little value. This kind of drain can only be made when the ground is filled with water, and is hardly applicable to moderately dry upland. It will therefore be seen that it can be only used to a limited extent. Northern Illinois presents the widest field for its profitable application. Central Illinois less so, and in Egypt it must be of doubtful value, from the close texture of the soil, which would in a short time fill up the drain. Brush and wood drains have been used for the want of tile, and in some places where limestone abounds, that has also been put in for this purpose. The difficulty in obtaining tile at reasonable rates has been the great drawback. Hundreds of thousands of tile are wanted annually for the single purpose of draining cellars and house grounds, to say nothing of the amount that would be used in gardens, nurseries, and on farms. Two attempts have been made in the tile making business, one at Joliet, and one at Glivea, 18 miles north of Chicago, but neither prove a paying investment. The one at Joliet is to be moved to Chicago, and by May it is expected that it will begin to furnish the smaller sizes of drain tile. Allen Howe, of 135 South Water street, is the agent. So soon as the tile are ready Mr. H. will notify the readers of the FARMER of the size and price at which they can be had. Early in March we sent him an order for a thousand pieces of two inch tile, but five hundred was all that were left over of last year's stock made at Joliet. These cost eight dollars a thousand, and the freight to this place at the same rate, being less than a car load they come at second class rates; by the car load they will cost about five dollars a thousand

pieces, and weigh three thousand two hundred pounds. Fifteen hundred will make nearly a hundred rods of drain, as the pieces are cut thirteen inches long; this at thirteen dollars a thousand will make the cost for the tile alone twenty cents a rod, but if the demand should become large, as we think it must, it will not be long before tile will be made at all important points in the State. It is possible that the brittle clays of this part of the State may not make the best of tile, but we shall not despair of it altogether for in some locations it makes a tolerable good brick. The brick clay at the south is still worse, but under the coal beds there is an abundance of pipe or fire clay that must answer an excellent purpose. Lands are now becoming sufficiently valuable to warrant underdraining, more especially for garden and orchard purposes. The side ditches of all our railroads should be laid with tile; it would not only make the road bed more solid but at the same time reduce the expense for labor to keep the track in repair at least one-third less. The cleaning out the side ditches is a large expense annually, and with tile little of this would be required, besides, when it was, instead of throwing out mud, the friable dry earth could be thrown out instead, as the bottom of the ditch will always be well drained, and the earth easy to handle. It is a matter of surprise to us that tile has not before been used for this purpose. The I. C. R. R. are to try the experiment early in the summer, and we doubt not with complete success.

The five hundred feet laid through the lowest part of our garden continues to discharge a good supply of water, though it is not what is called a slough, but moderately moist upland, being a simple depression of not over a foot in the upland prairie it has made the land on either side as dry as the most rolling part of the prairie; it is only the slough and these depressions that need draining. In draining, the first thing to be considered is a place to discharge the water, as it must run freely from the end of the

drain or the pipes will soon become filled up. The dryness of the past two years has had to a large extent the same effect upon the soil as though it was underdrained, but so soon as we get our usual forty-five inches of rain, with the usual number of cloudy days to retard evaporation, we will see the value of underdrains. We therefore urge the necessity of being ready by putting in the main drains or open ditches, into which the small drains may be discharged. A thousand feet of drain will cost but little, by way of experiment, and we have the fullest confidence that it will produce valuable results by doubling the quantity of the crop upon all land that contains standing water through part or all of the year.

Advancing the Wages.

Wm. R. Arthur, General Superintendent of the Illinois Central railroad, has just issued a circular to conductors and others in the company's employ, stating that he has decided to advance the wages of employees during train service. The reasons which the superintendent gives for his course are plain, sensible and to the point, and show that he well understands the principles that should govern an employer in his course towards his employees. If such principles were carried out on all the railroads in the country, they would soon experience the most beneficial results from such a course. None but good and trusty men should ever be employed on a railroad, and such men should always receive a proper remuneration for their services.

The superintendent says:

"I wish to correct the impression that length of service alone entitles men to promotion in this company; it is unsafe reliance. The desire for promotion should be accompanied by the most vigorous performance of the duties in hand. A large proportion of the applications for situations which I receive, come from men who perform their present duties negligently, because they think their capacity lies above the work assigned them. Promptness, intelligence and fidelity to the company's interest, in any position, will sooner or later be discovered and recognized."

The salary of passenger train conductors is advanced from \$66 66 to \$75 per month, and other employees in proportion.—*Ex.*

The same principle of advancement should hold good among farm hands. But under the present plan the country is flooded with a worthless set of men perambulating the country and begging from farm to farm. If

we would compel these men to work and pay wages in proportion to the work done we would soon see an improvement. If every farmer who is asked for food and shelter should compel those vagrants to work one, two, or three hours, they would soon save their wives from a deal of annoyance from these gentry. Last month we employed a man for the month at low wages. Not that we then had need of him, but from his appearance supposed he would make a good hand, but he could not afford to do much for low wages, and intimated that when the wages were raised and the season's work commenced he would be all right. When the month was up he took his eight dollars, being more than he had earned, and must look up another place. A man who will not be faithful under such circumstances is of no value, and an increase of wages will make them no better. This man was begging his way, stout, healthy, and capable of being useful, but the fear that he would do more than earn his wages ruined him. Before he left another man was hired in his place at higher wages, but it was too late, he had proved himself a laggard. We have worked out for five dollars a month after we were sixteen, and worked as hard and as faithful as when afterwards our wages were a hundred dollars a month. A man who will not be faithful with low wages is not safe to be depended upon at any time. Ed.

Elevations of the Country.

Col. Whittlesey read the following paper before the Cleveland Academy of Natural Science:

LAKE ONTARIO.—1st, Lockage of the canal along the St. Lawrence river, by the Canadian surveys, 234½ feet. 2d, Survey of the Oswego canal, New York, 232 feet. Mean, 233½ feet.

LAKE ERIE.—1st, Survey of the Erie canal in 1817, 561,20 feet. 2d, Lockage of the Erie canal as constructed, from the mitre sill at Albany to the mitre sill at Buffalo, 567 feet. 3d, (railroad survey) Catskill to Portland harbor, in 1828, 565 feet. 4th, By Captain Williams' survey of the Niagara ship canal, September, 1834, assuming the Canadian level, 234½ feet for that lake; above Lake Ontario, 328½ feet—563 feet. Mean, 564 feet.

LAKE ST. CLAIR.—By S. W. Higgins' geological report of Michigan in 1840, 5 feet above Lake Erie; 564 and 5 equals 569 feet.

LAKE HURON —By S. W. Higgins' geological report of Michigan in 1840, 13 feet above Lake Erie; 564 and 13 equals 577 feet.

LAKE MICHIGAN, (southern extremity.)—By railroad survey from Toledo to Michigan City in 1851, (J. H. Sargent, C. E.) 18 feet above Lake Erie: 18 and 564 equals 582.

Thus Chicago is 582 feet above tide water. The Ohio at low water is 300 feet below this, namely, 282 feet. Central Illinois is much of it higher than Chicago; at this station it is 157 feet.

At Monee, thirty-four miles south of Chicago and twenty miles south of the lake it is 212 feet above the lake, being 794 feet above tide water. This point (Champaign) is 630 feet; Mattoon, 631 feet; Effingham, 587 feet, being nearly on the same level with Chicago. Centralia, 492-feet; Big Muddy river (low water), 232 feet; railroad track at Big Muddy river, 379 feet, being 47 feet above the stream; Jonesboro, 629 feet.

The railroad passes through the "Grand Chain," along the depression made by the "Drury," and the hills on either side traverse several hundred feet above the road bed.

The top of the levee at Cairo is 41 feet above the river, being 323 feet above tide water. By this it will be seen that the descent of the Mississippi to the ocean is very rapid, and if the stream was small could be used for manufacturing purposes, but the immense volume of water gives it depth.

Pana is 92 feet above Chicago, or 674 feet above tide water; Decatur, 564 feet; Clinton, 625 feet; Bloomington, 721 feet; road bed at the Illinois river at Lasalle, 508 feet, being 74 feet below Chicago; Mendota, 747 feet; summit between Illinois and Rock river, 918 feet; Dixon, 716 feet; Rock river (low water), 634 feet, being 52 feet above Chicago. Freeport, 657 feet; Wisconsin State line, 983 feet; Scales Mound, 940 feet; Galena, 598 feet, being 16 feet above Chicago. Dunleith, 617 feet. The Mississippi to Cairo falls, nearly 300 feet.

For the elevations along the I. C. R. R.

we are indebted to the politeness of the engineer department under the control of chief engineer Clark.

Our readers will see by the above that the country is not quite level, but on the contrary, shows a wide difference of elevations, giving ample drainage. The water sheds are, 1st, the "Grand Chain," near Jonesboro; 2d, Central Illinois, and next from Monee northwesterly to Scales Mound. To describe the topography of our State would require more space than is at our disposal, but we hope these hasty notes will be found of interest to our readers.

Flowers.

Much has been written on this subject, and we are glad to notice a very slight improvement in consequence. Nothing looks more beautiful than a well kept flower garden. What gives your wife and daughter more pleasure than to visit a nice garden that is filled with flowers? Perhaps you have begrudged her the small place in front of the house, or ten to one you have no place in front at all, and all the flowers that she has, are out in the back garden (if you have one) among the cabbages and turnips.

Often have we been at a neighbors at this season of the year and find the good wife looking up her flower seeds. The husband is either busy plowing or planting and can't afford time to spade up a foot of ground for her, and often have we laughed to see how awkward a woman is with a dull spade in her hand, trying to turn over the earth, so that she can have a few flowers. Why, a man that has a family ought to be ashamed to let his wife undertake such a job, when he could in an hour's time spade up more ground than she can in a week. This may be all economy; better to have half an acre more corn than you can even half tend, than to have a few flowers in your front yard, and your wife and children good natured, and to be obliged to hear such sayings as: "I do wish father had as nice a yard as Mr. Smith's;" and perhaps your children

would'nt want to go over to Mr. Smith's every day or two, and put you to the trouble of going or sending after them.

An hour's work spading and two more in raking and sowing will pay you more in the end than two acres of corn.

A great many men seem to be afraid that their wives and daughters will leave their work and get out of doors once in a while if they don't build their house close to the street. They are not afraid of their going into the back garden oftener than necessary.

But it would be a real waste of time if your wife left washing or baking, and should look at the flowers for five minutes; neither do we like those women who neglect all their indoor duties for the garden. A few shilling's will purchase a good stock of dahlias, phloxes, peonias, snow-balls, etc., all of which are easily taken care of and readily propagated.

A nurseryman always takes pleasure in telling how to separate and propagate any plants that he sells, (or if he won't we will if you will apply to us) and without extra charge. One dollar will purchase from twenty to fifty varieties of the most beautiful annual flower seed, and once got you can gather your own seed.

Be careful and not plant the fine seed too deep, and do not plant a seed the size of a pin head in ground that is not pulverized finer than hen's eggs. Better throw your money into the fire and save time and bad feelings toward the seedsman. If any of our readers are like the picture we have drawn we hope that they are ashamed of themselves and have already reformed, and that they send or have sent for some flower plants for their wives. Recollect that fine or small seed must be put in well prepared soil and slightly shaded and occasionally watered so as to keep them damp. The ground must not be allowed to become dry after the seeds have swelled. The best way is to have a seed bed and transplant your annuals. *

[From the Chicago Tribune.]

The Farm and Garden.

CHAMPAIGN, Jan 30, 1861.

THE SWEET POTATO.

We have now cultivated the sweet potato for thirteen years, and during that time have used our best endeavors to extend its culture. It has become more or less familiar in the village gardens throughout the State, and to some extent is grown for market. In 1847, when we first entered upon the experiment, little was known of its culture in the North, and few of our then population knew any thing of the plant. In 1846, Jacob Smith, of Lockport, Will county, made the first essay of a crop for market. He planted several varieties, among them the Nansemond. His success was quite flattering. The next spring we tried a few dozen plants, and to learn more of the mode of culture, visited the garden of Mr. Smith; we then came to the conclusion that we had planted too early; that from the middle of May to the 1st of June was quite early enough, (we then resided in Cook county), and this has since been fully confirmed; in fact, we have some seasons grown very good potatoes set the 1st of July. We have gone through the whole range of varieties from the Early Red to the Mammoth Yam of the South, but the Nansemond is the only variety that we have any faith in, or that is of any value to the North half of the State.

Another point that we are now prepared to urge is, that the seed should be brought from south of this point. We are aware that large quantities, in previous years, have been preserved over winter for seed at the north, but so far as we can now learn, all of these parties with the exception of one in Tazewell county, have abandoned the enterprise. Among these, we note one in the south part of Cook county. A sweet potato house at Ottawa was in the habit of putting up four hundred bushels a year but it became a losing business. Another practice is now, to some extent, being reformed: that was to save over for seed the small ones, which were of no other value. During the past three years we have given the subject particular attention, and are satisfied that no northern farmer should use plants from the small or half grown tuber. Nothing will now induce us to take such seed at any price. Last spring we sprouted five barrels of well ripened potatoes, and three of the culls, or small ones; these last cost three dollars per barrel less, but they did not make near as many nor as vigorous plants.

The large sweet potato houses that now supply the country, are in Indiana and Ohio. These have to be kept at not less than 40 degs. of the thermometer, while in Kentucky and the south part of our State, sweet potatoes can be kept in a dry cellar, but as they there grow the Red or Large Yellow varieties, they do not answer for seed with us. Were we disposed to keep over the seed potatoes, we do not think it would prove as profitable as to get them from points south, as they do not appear to do as well the second year. We do not pretend to give good reasons for this, but we know the plants grown

from potatoes from Indiana are much better than from those grown at Ottawa or Lockport.

Three years since we persuaded some of our friends near Jonesboro' to try the Nansemond, for though they would not produce quite as large crops there as the Red, yet they would be some weeks earlier, thus would be a gain in the price. The result is, that they are now growing this variety almost exclusively, and one of them took the first premium at the United States Fair, and we had to be content with the second. Indiana sends most of the supply to Chicago, but the time is not far distant when our own farmers will supply the home demand.

SOIL.

The best soil for this crop is a warm sandy loam. Winnebago has a good tract of this west of Rockford, and it abounds in Tazewell and other counties. The ridges of drift sand and gravel in Cook county produce good crops. On one of these drift belts near the Calumet river, Mr. Periam has been very successful. Heavy clay, if well drained, deeply plowed and well pulverized, will produce good crops. The lighter clay loams are only second to the sandy loams. In the north part of the State hazel bush land is valuable; in Central Illinois the *mulatto* colored soil, or light dry loams, are to be selected. South of the "Big Muddy" they thrive well on any of the soils, whether mountain, limestone or silicious conglomerate. On the lime *mud drift*, or prairie portion of Egypt, the crop is more uncertain from excessive wet or drouth.

CULTURE.

In cultivating this plant, which is of the trailing convolvulus family, one indispensable condition is, that the sets must be planted on small hill-like mounds or ridges. In garden culture, the hills are usually employed, but in all cases we prefer the ridge system, both for cheapness of culture and a better yield. In the garden the ridges are thrown up with a spade. They should be two and a half feet at base, and a foot high—the top not sharp, but round, of not less than six inches broad at the top. In field culture the spade system would be too expensive, and we must use the plow to throw up the ridges. We have adopted a new plan to *ridge up*. To do this we mark out a land as though we intended to plow around it; we go around once in the usual way, then we alter the plow clevis so that the plow will run about four inches below the bottom of the first furrow, and to cut about two inches from the unbroken land. This, with a good deep tilling plow, will throw this second furrow out upon the first. We next drive around, letting the off-horse go on the *land*, and so near the furrow that the new furrow now being cut will just reach the edge of the first furrow—we then repeat as before. This makes the ridges three and a half feet apart from centre to centre, and of fair size. Before setting we go over the ridges with a steel rake and smooth them down, and then set the plants about sixteen inches apart, one in a place. We never wait for a rainy spell to set the plants, but prefer to set as we *ridge up*. This is done with a dibble, which is a pointed

iron something like the one on the lower end of a surveyor's staff; one of wood will answer. This is thrust into the place where the plant is to be set, some four or five inches deep. Hold it in the right hand, and with the left hand hold the plant in the hole as deep as it should be set, and with the point of the dibble rattle in fine earth to within an inch or so of the surface. Do not press it at all about the plant; nor is it material whether the earth is damp or quite dry, but see that it is fine and not lumpy. A boy or man follows the person setting; with a pail of water, and pours about half a pint on the roots of each plant; and so soon as the water settles away, the ground should be filled in and made level about the plant. Cultivate with a shovel plow, so as to destroy the weeds between the rows and at the base of the ridge. A hoe will be necessary to finish up.

A NEW IMPLEMENT WANTED.

We want an implement that will run between the ridges before planting, so as to throw all the loose earth upon the ridge to give it form, and to be followed with a corrugated roller, that will pulverize the lumps and press the ridges more firmly together. It will be seen that we cannot pulverize the ridges with a harrow, and that the small lumps must remain as thrown out with the plow; but with a roller made so as to fit the ridge, this could be accomplished, if followed soon after the plowing, and would greatly benefit the soil. Who will invent and get up this implement?

WHAT SHALL WE PLANT AFTER?

Sweet Potatoes do well year after year on the same ground, with the addition of well rotted stable manure. After Irish potatoes—corn, beans, the small grains, (if fall plowed), and other garden vegetables. The ground should be sheltered from the winds that rob the soil of its heat, and as they are not to be set until danger from frost is over, we should give them a

SOUTHERN ASPECT,

For being a tropical plant, they like the sun in all its vigor. Our object should be to give them plenty of heat, and to keep off the north and northwest wind. In setting them in the garden, give them the lightest spot towards the south, but with a back ground of high board fence, trees or shrubs.

A WORD TO THE EXPRESS COMPANY.

A large share of the plants set are sent through your hands, for it is cheaper to purchase a few hundred plants than to attempt to sprout them. The plants are put in shallow boxes open at the top, and of course just in the condition to water if needed. When packages have been in your hands three or four days, they are apt to show signs of drooping, and in that case nothing is so natural or shows more unmistakably your care as to water them; but unfortunately this kindness of yours is their sure death. The leaves will soon turn black, and in a few hours the plants are not only dead, but produce an offensive rotten mass. While all other plants in the same

condition may be benefitted by watering, or would die without it, it is death to the sweet potato plant, and so dangerous is water to the leaves when packed, that the plant should never be taken from the beds when the dew is on. We have known thousands of plants lost by watering, both by express agents and dealers. If you think water is needed, you can wet the roots by putting the bottom of the box in water, which will moisten the material in which the roots are packed, but never otherwise.

No farmer should fail to set out a patch of sweet potatoes, as they are cheaply and certainly grown. Most people are fond of them, and they add another valuable vegetable to the list of our garden and field products.

ON SHIPPING.

Farmers who grow this vegetable for market should always ship in cheap barrels. They should be carefully sorted, for a lot of small roots in a barrel will lessen the price more than they will weigh. When sent in bulk they will become wilted, and if the city dealers put them up to ship north, they do not arrive in good order. It is not necessary to give much air, as flour barrels are sufficiently open without having holes bored in them. We have sent them to the north part of Wisconsin in this way as common freight, and they went through in fine order. Farmers who sprout their own plants will find this a profitable crop, if their soil and aspect is suitable, and they give them the proper attention. It is probable that dry sawdust or any other like substance would be valuable to pack them in, when to be kept for a long time. As it is, neither farmers or dealers take any correct method to have this valuable vegetable presented in the market in a good condition. The consequence is that the market is an uncertain one both in demand and price, and no other vegetable is subject to such great fluctuations. If the farmer will send them to market in barrels, in good order and well selected, the trade would extend to all the north ports where our shipping and railroads reach, but so long as they are sent forward in bulk, in sacks, and in gunnies, the trade will maintain its present status.

RURAL.

The Crop of Acorns.

There came a man in days of old,
To hire a piece of land for gold;
And urged his suit in accent meek—
“One crop alone is all I seek;
That harvest o’er my claim I yield,
And to its lord resign the field.

The owner some misgivings felt,
And coldly with the stranger dealt;
But found his last objection fail,
And honeyed eloquence prevail;
He took the proffered price in hand,
And for one crop he leased the land.

The witty tenant sneered with pride,
And sow’d the spot with acorns wide;
At first like tiny shoots they grew,
Then broad and wide their branches threw;
But long before those oaks sublime,
Aspiring, reached their forest prime,
The cheated landlord mouldering lay,
Forgotten with his kindred clay.

A Rational way to Grow Celery.

The past ten years have made great advances in the art of culture, not only on the farm, in the orchard, but more particularly in the garden. Old long-time practices that had grown gray with age and superstition, have been swept away. Paving the bottom of vine borders and asparagus beds, sowing in the moon, and cutting weeds when the sign was in the heart, have become matters of history, and this young generation almost begin to disbelieve in the fact that they once existed, much less in their potency. The practice of growing celery in trenches is just on the eve of leave-taking, and our present object is to send it out altogether. Just think of it, you lovers of celery, you who have been taught to believe that the growing of this luxury is attended with severe labor with the spade, to set out the trenches two feet deep, that after the plants are set, the first heavy rain will destroy the greater part of them by the falling in of the walls of the ditch; that, from time to time, you must, with hoe in hand, gradually fill in around the plants until the ditch becomes a mound or ridge, your plants not over strong and prematurely blanched. In taking up, you must again go through the excavating process, and unearth your favorite. You pack it away in the cellar in earth for winter’s use, and find half of it spoiled by heating or dampness. You murmur over your ill-luck, but you cannot dispense with the plant, and on the return of spring, another hot-bed is made, and you again go through the same round of partial success.

Did you never wish there was some other way to grow celery? Perhaps you have, but you must follow in the way of old professional gardeners, and be content. Well, let these old professional gardeners have their way, of which they are so much in love that they never allow a thought that any improvement can be made over what they have been taught, and we will proceed to give you a cheap and rational way of growing this plant that shall please you to an almost indefinite extent. In the first place, you need not sow the seeds in a hot-bed, but in the open ground, in April. These will be ready to set out in July, and be ready for use the first of September, certainly as early as hot-bed plants set in the bottom of a two foot ditch. The plants will need cutting back once or twice, to make them more stocky—with a shears or sythe cut the tops off a third of the way down, as they stand in the seed beds.

About the first of July, the early peas, potatoes and onions can be cleared off, the ground

plowed or spaded, and the plants set in rows four feet apart, and six inches in the row. Work the ground once a week with cultivator or shovel plow until the plants are fifteen or eighteen inches high. Recollect, this is none of your sickly stuff, grown in the bottom of a two foot ditch. At this stage of its growth, throw a light furrow against the plants, and with the hand straighten them up, so that the stems will stand close together. After a few days you can then turn a heavy furrow against them; this will stand ten days to extend the hearts, when the barking is finished with the spade. We think that you will say that this is a cheap and ready way to grow giant celery, in spite of the profession.

TO WINTER OUT OF DOORS.

Select a dry piece of ground where the water will not stand; if in clay, it must have a good natural drainage; lay off the trench a foot wide, and excavate to the depth of the celery. Take the plants up and shake out the earth and set the roots on the bottom of the trench, and pack the plants as close as they will stand. Put nothing between them, simply fill the trench as solid as they will stand without bruising the stems. The moisture of the bottom of the ditch will be sufficient to keep the plants in good condition. In putting them in have them stand perpendicular. Celery should not be taken up too early, as it will whiten too quickly and rot, not a very desirable result. About the 15th of October at this point, and earlier further north, is about the right time to begin, so as to close about the 25th, if you have much of a stock; if not, you can look after it during this time if you have leisure. Select dry weather to take it up. In the next place, throw on to the edges of the trench about three or four inches of stable manure, leaving a strip of the green leaves of the celery sticking out to permit evaporation, and to prevent a too rapid ripening. As soon as there is danger of frost—say the last of November or first of December—put on a final covering of coarse manure, six to eight inches deep, and wide enough to protect the sides of the trench from frost. The object is to completely protect the ground from freezing, yet not to heat the plants. Of course, this will depend on the exposure and quality of the material used. Farmers can use chaff for this purpose when they have it. You can now take it up at any time it is needed for winter use, and you will find it completely blanched. The growth has been natural and vigorous, and the blanching being an after operation, the plants will be found rich and crisp.

Grow your own plants and not call in any professional advice, if you wish to succeed. Of course, you want rich and deeply cultivated land; if too flat, throw it up into beds, so that heavy rains will not check the growth.

Flax Cotton.

The subject of discussion before the Legislative Agricultural Society last evening, was the culture of flax and its preparation for spinning. A full report will be found in another column.

We have watched with much interest the movement for the introduction of the flax fibre as a substitute for cotton. There is reason to believe, incredible as it may seem, that the substitute has been found which, before another generation passes away, will take the place of cotton in so large a degree as not only to drive "King Cotton" from his throne and reduce him to the ranks, but relieve the world from dependence on him altogether—enable it in fact to have plenty of shirts, if need be, without being helplessly dependent upon him and his worshippers.

Somewhat less than seventy years ago, the cultivation of cotton in the Southern States was an experiment; forty years ago, the value of the crop was over \$20,000,000; at the present time that must be multiplied by ten. With all this the Southern planter had little to do: left to himself and his own genius and invention alone, there would have been no quarrel on the tapis to-day about negro slavery, because nobody would have thought of cotton as king. The vast impetus given to its cultivation grew out of the inventive genius of others. Whitney, a "Yankee," taught the planters how to clean it at a comparatively nominal expense; while Arkwright and others furnished the machinery by which the cost of spinning and weaving was reduced so low as to make the cloth incomparably the cheapest textile fabric the world has ever seen.

But genius is not dead nor invention exhausted. They have done with cotton, however, and are bestowing their attention elsewhere. For several years they have been performing experiments upon flax and hemp, with the hope of obtaining from one or both a substitute for cotton that would be cheaper than cotton itself, with the manifest advantage to the world that its production would hardly be bounded by climate.

Several machines have already been produced which perform the work, but until recently no one that could do it cheap enough. That point has now been reached, it is said, but whether it has or not, the principle has been discovered, and Yankee ingenuity will not let it alone till the machine is made which will take the flax as brought from the field, without any other preparation than drying, and turn out the fibre ready for spinning at a price not exceeding ten cents a pound. No invention could be more opportune, or so important to the free States. In less than thirty years from the first introduction of cotton seed into this country, the value of the crop exceeded thirty million dollars. So, in less than that time, with the aid of this new invention, will the flax crop of New England alone be worth

more than that sum, and at the same time making us independent of the South and of all other countries for our clothing.

In the adjoining city of Roxbury, a manufactory is now established which imports rough flax from Iowa, converts it into various conditions suitable for mixing with cotton, wool or silk, or to be made into cloth by itself, and we understand that it is doing a profitable business. And we do not see why it should not, if a substance equal in value to middling cotton can be produced—as we are assured that it can be—at ten cents a pound, and leave an ample profit. We believe the grand secret has been discovered which will convert “*King Cotton*” into a very useful and unpretending *servant*, and that, as the process goes on, new machinery, or new inventions will be brought in to facilitate the movement, and to make it a regular, important, and permanent business.

A friend at Boston sent us the above, cut from one of the Boston papers. We shall be glad to hear of success in this direction. The prairies are eminently adapted to the growth of flax and hemp, and if the fibre can be used to advantage, it will form a valuable crop. For the seed alone it is grown to some extent, and when near an oil mill, will pay about the same as wheat and corn, but if the lint is added to this, it will at once command the position of a staple crop. We append a portion of the remarks of the meeting alluded to:

Ed.

Mr. F. W. Tappan said it occurred to him that there are practical men present who would like to ask questions relative to this. The flax displayed was manufactured in this vicinity a great deal cheaper than cotton. And why? It is raised like hay, not picked so slowly, but cut with a sythe, and can be raised continually on the same land, and every year, not once in two years, like wheat. Not only is it labor saving, in picking or pulling, but also in curing. He stated an instance where it had been raised, cured and sold in its perfect shape at 15 cents per pound, after being transported to the manufactory, and back to the place where it was raised. By the machines which have been invented, these coarse and long fibres can be made fine and nice for cloth.

In relation to raising it, it could be done almost any where. They raise it out west and throw it away. We only need to encourage for it a market in New England to insure an ample culture of fibre for a complete supply.

Mr. Nicholson said it was two years since he had his attention called to this subject, and since then has looked into it a good deal. He displayed the specimens of the article in its different stages of curing and manufacture. The long, natural fibre is passed through a machine, stretched and broken. Then it goes through the chemical process by which it is bleached, and reduced to a state fit for manufacture. In the transformation flax loses a great deal less than cotton. It receives the coloring as readily as cotton or wool. A

pound of this cotton will make as much as a pound of Southern cotton. The specimens here presented were produced under his own eye. It costs in the natural growth \$5 per ton. Reduced by the machine, this brings 800 pounds, making the perfect cotton about 400 pounds from this quantity.

The Chair said that we could not hope to cultivate flax as it is cultivated in the west. The texture of the cloth is different from that of linen—not so hard and chilling. As to the manufacture of it, they only wanted the article brought to any cotton mill, as it was cured and baled by the farmer, and the manufacturers would work it up from that condition.

In answer to a question, he said the process in England of cutting the fibre has been mostly abandoned. Its parts will not adhere so well when cut as when pressed or drawn apart, as by the old process, in rollers.

Mr. Randall said the difficulty in this manufacture has not been in raising flax, but in adapting machinery fit for curing it. He at first had no faith that it could be manufactured upon cotton machinery. It could not be done by cutting, but in spite of his prejudice against it, he experimented by *pulling* the plant apart, and was astonished at the success with which it could be manufactured after that process into cloth. In his opinion, the flax plant could be cultivated and manufactured here in the industry of New England, so as compete with cotton. It is the hand labor that has made this plant unprofitable to the farmer, and it can only be removed by improvements, as it had been removed in a great measure. He could hardly tell how much had been manufactured. He believed in the old commandment, “Thou shalt have no other God but me.” He did not believe in bowing down to the fifteen cotton States when we are able to supply ourselves.

Hedges and Timber Belts.

ED. FARMER:—I cannot too highly commend the article in your February No. on “Hedging—Timber Belts—Railroads,” &c. This is the kind of instruction our friends want on these topics. We have generally half prepared our ground for our hedge rows, set them too wide apart, cultivated them too little, and especially trimmed them too much the two or three first years. I agree with you perfectly that the higher a hedge is grown, the better, except where it obstructs the view. I think I can raise a better crop, and more stock, on every forty acres of land, or every eighty acres at most, surrounded by a hedge twenty feet high, with a grass turn row fifteen feet wide all round it, than any one can raise on the same ground, all naked and open, with the cold wind sweeping unchecked over it. No one would believe how much such hedges check the force of the cold wind on crops and stock who have not tried it. I am now setting

out my land, with hedges around every eighty acres, six inches apart in the row, cultivate them two or three years, and never trim them at all, except to check the most rapid growers, and keep the plants even in the row. I shall let them grow right up for a screen twenty feet high, if they will, and as soon as they please. I find they will stand this usage much better than I once thought it possible that they could; and at any time if it is desirable to stop hogs out of the lot, a man with a good slather and a fork can cut limbs off and do it upon the run; and if the hedge ever gets too high, or needs lowering or thickening, which it will not do for ten or fifteen years, at least, it can be cut off right at the ground, and piled up for a temporary fence, or burned up, as you please, and the hedge will sprout out thicker and better than ever at the bottom.

Thus the cost of a hedge that will stop all sorts of cattle, give them shade and shelter, and allow of using every lot in the fall separately, will not cost the farmer twenty-five cents per rod, all told, and it will out last many a board fence, at least, so I think; and many of our best and more thinking farmers are beginning to think so too, and to act accordingly; and hard as the terms are, there never was half so great a demand on me for hedge plants as there has been this spring. But I sold out long before the spring set in, and can supply no more this year.

I have no doubt that our railroads are losing millions of money in the west by not taking your simple and sensible advice.

Yours truly,

J. B. TURNER.

It is with no small degree of pleasure that we present to our reader the above indorsement of our views in regard to hedges and timber belts. Prof. Turner is one of the pioneers in hedging, and probably more than any other man, has been instrumental in bringing forward the Osage Orange to the attention of the public. Of course, at first it was an experiment, and the habit of the plant was not well understood, but now we know better how to manage it, and hedges will soon belt the land, and make beautiful our wide reaching prairies.

Ed.

Advantages of St. Clair County.

ED. FARMER:—Having seen a late number of your valuable journal, and knowing the many advantages that must accrue to all persons, and especially the farmer and mechanic from so read-

able a paper, I would commend it to all as a very important document, and I might say that such documents are too rarely read by the farming community.

Here, in our own county of St. Clair, is one of the best fields for improvement in agriculture and mechanical arts that can be found in the State; the soil is exceedingly fertile, and its productions are abundant. Coal of the best quality can be obtained in almost every township and at a small cost. Timber is sufficiently abundant for all ordinary purposes; and situated as we are, in such a fertile district, with all the facilities for communication and the exportation of our products, if sufficient attention be paid to the cultivation of the soil, we see no reason why St. Clair should not rival her sister counties in productions.

Too much estimate cannot be placed on journals that convey the true modes of agriculture to our farming class. Agriculture is said to be the "Basis of a nation's prosperity," and how many hundreds of farmers labor under disadvantages that appear to injure them but little, while in the meantime, is injuring them very much, the greater part of which might be alleviated by the reading of an instructive paper devoted to their cause.

AMERICAN.

Fayetteville, Illinois, March 17, 1861.

We have long known St. Clair to be one of the best counties in the State. It was among the first settled in the State, and in point of wealth and population, is one of which we should be proud. She has a population of 37,700, having increased 9,146 in the last five years, which shows that her advantages have been somewhat appreciated. Lying so near St. Louis, she has a most excellent market. Near Bellville are some fine vineyards of the Catawba, and at Summerville, on the O. & M. R. R., is the extensive nurseries of the Messrs. Babcock & Bro. We have large lists of subscribers in this county, and hope some of them will post us up in the progress they are making. We intend to visit some parts of the county in June.

Ed.

The Nature and Habit of the Honey Bee.

ED. FARMER:—If these few suggestions on the nature and habits of the bees meet with approbation, you are at liberty to use them,

It is a subject that is over looked by too many thinking men. Is there not thousands of dollars locked up in the vaults of flowers that are so

plentiful on this noble continent; and none but the industrious bee can collect it for man.

Such is the order of nature in the economy of the honey bee, that in the spring, or at the commencement of summer, there is thrown off from the parent hive from one to four swarms, or independent colonies of young ones, which, immediately after being domiciled, commence operations for themselves. It may be remarked that working bees are taught by instinct the time they are to quit their hive.

The almost unfailing precursors of swarming are these; For several days there is an unmistakable commotion in the hive. On the lighting board, in front of the entrance, the bees cluster in masses, and at nightfall retire again, as usual, within. On the next morning after, if the weather is favorable, the confusion increases, and suddenly a column of bees hurry, by a simultaneous movement, into the air, and within a few moments assume a novel spectacle of thousands of these insects, all on the wing, flying in whirls until the mass resembles in outline a globe of forty or sixty feet in diameter. The young swarm thus continue whirling over or very near the old hive until all their associates have been assembled in the ring. This, indeed, is the trying moment for the apiarian, for if he is successful in obliging the bees to alight they at once can be secured in a new hive. First swarms are always the strongest. The old stock may be said to be without a head for from six to nine days, according to circumstances, until another queen is hatched. It is then that she begins to attack her rivals in the cell, and utters the shrill sound, "peep, peep," while the imprisoned ones cry "goo, goo." This is termed "calling" the queen, and the evening is the best time to hear these significant sounds, which continue night and day until one or more rivals appear; then the general uproar ensues in the hive, and another swarm comes forth, perhaps on the third day after the sound began. The same process goes on with the next, which is smaller in number, and at shorter intervals, corresponding with the period between the laying of the queen's eggs and the state of the weather, or the temperature of the hive.

Yours truly,

WILLIAM FRAZER.

Annawan, Ill., March, 1861.

We are glad that an increased interest is being awakened to the subject of bee culture. The moth is the great drawback, and our apiarians

should turn their attention to it. We shall have something to say on hives in another place.
Ed.

OFFICE OF CHIEF INSPECTOR, }
Chicago, Feb. 27, 1861 }

EDITOR FARMER—*Dear Sir:* I have commenced the collection of a cabinet of wheat and other grain for the use of my office and general information of all parties interested, either as producers or purchasers. Knowing the interest you take in such matters, I write to ask you to forward to me samples of the different varieties (or any one of them) of wheat grown in your county. Also give me their origin, when introduced, their tendency to improve or deteriorate, their appearance when growing, and good and bad qualities generally.

Please inform me if there is any agricultural rooms in the State where samples have been preserved from the different County or State Fairs. Also please give me a list of names of gentlemen who would willingly give me information and assist me in this matter.

I have now about fifty samples. Should any of your friends wish any variety of spring wheat for seed, I am prepared to exhibit samples, and give information as to quality and of whom the same could be obtained, either the growth of this State or Wisconsin.

Yours truly,

S. H. STEVENS.

The "Board of Trade" of Chicago in selecting Mr. Stevens Chief Inspector, have shown their usual good sense. It will be seen by the above letter, (which, by the way, is a private one, and not intended for publication,) that Mr. Stevens is taking active measures to collate a mass of valuable information as well as to collect valuable samples; and in this endeavor we hope that some one or more of our readers in each county of the State will send samples of their agricultural skill. The Corresponding Secretary of our State Agricultural Society is engaged in a like work for the benefit of the farmers. These efforts should be promptly seconded, and we will soon see an improvement in the quality and quantity of our farm products.
Ed.

—A rough Kentuckian, hearing a child cry loud and furiously, remarked: "How wickedly that small sample of mankind is swearing now, in the infantile vernacular! What will it come to when it is educated."

Warren County.

EDITOR FARMER—*Dear Sir:* The following names are the newly elected officers to conduct the Warren County Agricultural Society for the ensuing year, which you will please place in the FARMER:

J. B. Meginnis, President; B. F. Morey, Vice President; John E. Alexander, Secretary; J. Quinby, Treasurer; Joseph H. Kirby, J. D. Potter, C. Hardin, John C. Brown, French Brownlee, Henry Curtis, C. Coats, Executive Committee.

Respectfully yours,

J. B. MEGINNIS.

We are trying to use our utmost endeavors to promote the agricultural interest of old Warren, and consider our society in a flourishing condition; have every facility for making it compare favorably with any county in the State in a few years.

J. B. M.

Monmouth, Ills., Feb. 7, 1861.

The New Patent Law—Extensions Prohibited—Important Changes.

The new patent law passed at the last session of Congress, and approved by the President on the 2d of March, makes several important changes in the patent regulations of the country. The following is a summary of its provisions:

1. That the Commissioner of Patents may establish rules for taking affidavits and depositions required in cases pending in the patent office; that they may be taken before any Justice of the Peace, or other officer authorized by law to take depositions; that witnesses may be subpoenaed and punished for disobedience to process of subpoena.

2. To secure greater uniformity in the grant and refusal of patents, the President may appoint three Examiners-in-Chief, at a salary of \$3,000 each, who shall be persons of competent legal knowledge and scientific ability.

3. No appeal shall be allowed to the Examiners-in-Chief from the decisions of the primary examiners, except in interference cases, until after the application shall have been twice rejected.

4 to 7. The next four sections of the act specify the salaries of the Commissioner, Chief Clerk, and Librarian; provide for the restoration and disposal of models, and dispense with models where the design can be sufficiently represented by a drawing; the tenth section of the act of March 31, 1857, which authorizes the appointment of agents for the transportation of models and specimens to the office, is repealed; and the Commissioner is authorized to appoint Assistant Examiners.

8. Papers filed at the office, if not correctly and legibly written may be printed at the cost of parties filing such papers. For gross misconduct the Commissioner may refuse to recognize

a person as a patent agent, either generally or in any particular case.

9. The three months' service to caveators, by the act of July 4, 1836, shall be computed from the day on which the notice is mailed at Washington, with the time for transmission added.

10. All laws relative to fees are repealed, and in their stead the following rates are established: On filing each caveat, \$10; on filing each original application for a patent, except for a design, \$15; on issuing each original patent, \$20; on every appeal from the Examiners-in-Chief to the Commissioner, \$20; on every application for the extension of a patent, \$50; and \$50 in addition on the granting of an extension; on filing each disclaimer, 10; for certified copies of patents and other papers, 10 cents per 100 words; for recording assignments, agreements, power of attorney, etc., 300 words and under, \$1; under 1,000 words, \$3; and for copies of drawings the reasonable cost of making the same.

11. Specifies who may be applicants for patents.

12. Applicants must be ready for examination within two years after filing petitions, or they will be regarded as abandoned.

13. Persons selling articles under the protection of letters patent must give sufficient notice to the public that such articles are patented.

The act further provides that printed copies of the letters patent, with the seal of the patent office, and certified and signed by the Commissioner, shall in all cases be legal evidence of said letters patent; that all patents hereafter granted shall remain in force for the term of seventeen years from the date of issue; *all extension of such patents is prohibited*; and all former laws inconsistent with this act are repealed.—*Ex.*

By the above it will be seen that the change in the patent law is important in several particulars. Seventeen years, and no extension; what an amount of lobbying will be cut off; what fat jobs for the patent lawyers gone to grass. We do not know whether this law will cut off the McCormick reaper extension, but with the delay now granted, to take testimony, we have little fear that this monopoly will again be fastened upon the farmers of the northwest. Mr. McCormick ought to be satisfied with one of the most princely fortunes ever made on a patent, without another levy on the industry of the country.

Sugar Cane Growers' Convention in Bureau County, Illinois.

Pursuant to a public notice a convention of the sugar cane growers of Bureau county assembled at Bacon & White's Hall, in Princeton, on the 21st ult., Dr. N. Bort, Chairman, and E. S. Phelps, Secretary.

Dr. Bort thought good sirup should be kept in a warm place, where it will granulate into sugar. He exhibited some thus kept. The doctor raised considerable sirup in 1860, and was very confident that its cultivation would pay the farmer liberally.

Hart N. Morris manufactured 1,000 gallons of sirup from six acres of cane. He exhibited some very nice sirup. He cut his cane October 13th, placed it in a large pile, under a shed at the north side of his barn, and kept it dry. He worked it up on the 15th of November. He feels confident that if cane is cut up before a hard frost, it will keep for months, and will make excellent sirup, if only kept dry. It should be put in when there is no dew on it.

Mr. Giles said that green cane cut up in the middle of September, and kept in a pile, not covered, and worked in the middle of November, would make good sirup, and he exhibited samples thus made which were esteemed better than that obtained from green cane just cut.

Mr. Morris thought cane raised on barrens made better sirup than from any other land, and in this Mr. Choate agreed. He thought coal much better than wood to boil with, as it produced quicker evaporation and made better sirup. He took the first premium for sirup at the county fair in 1860, and he used coal instead of wood for evaporation.

O. W. Giles manufactured 1,600 gallons of sirup in 1860. He was of opinion that much depended on securing the cane before hard frost, even if cut green.

Joseph H. Brigham exhibited sirup made from Sorghum, Imphee and Sugar Millett. In his estimation, the last named will prove the best variety. He thinks large canes not so rich as the smaller ones. He used four sheet iron pans set on an arch, and made a barrel of sirup in six hours. He made 1,400 gallons in all in 1860.

John Masters manufactured 300 gallons of sirup. He exhibited some sirup from Sorghum and some from Imphee. The Imphee cane was frozen solid. When ground, the juice looked like soap suds, and he did not suppose it would make anything, but concluded to try it. He boiled it until he thought it would do for sirup. When cool, to his utter astonishment it proved to be about one-third sugar. He was confident Sorghum would not produce sugar in such a state. He thinks the only difficulty in making sugar from Imphee is in getting it dry.

Various persons estimated the cost of raising and manufacture of sirup at from twenty to forty cents per gallon.

Those who had seen sirup manufactured by steam, thought that the best and cheapest mode, as it would make cleaner sirup than pans.

All agreed that the sirup, in cooking, should be well cleaved, and that made from frozen cane was apt to burn to the bottom of the pans, while no difficulty was experienced in this respect from that not frozen.

John Belangee had planted his cane and corn side by side very early. Both came up very well, but hard frosts cut the corn down completely, while it left the cane uninjured.

E. S. Phelps, Jr., had the same experience as Mr. Belangee. In 1859 his corn, vines, etc., were completely killed by the frost, while his Sorghum was not hurt.

L. C. Field, of Galesburg, had a friend who planted his cane in a hot bed, and when about six inches high, transplanted it into the field. He raised the best crop of cane he had ever seen.

E. S. Phelps, Jr., had transplanted considerable, in 1860, with decided success. It was as easy to transplant as cabbages. He transplanted in dry, hot weather, when cabbages would have died, and most of it grew well.

The necessity of having better machinery and arrangements for manufacture was discussed at length, and courage and perseverance was recommended to all.

O. W. Giles, of Wyandot; Hart N. Morris, of Arispe, and Samuel L. Choate, of Indiantown, were appointed a committee to have the subject in charge for the ensuing year.

In regard to the above convention, the Bureau county *Republican*, from whose report we condense the above proceedings, says:

"There certainly can be no longer any doubt entertained of the ultimate success of cane growing in this county. Our farmers, during the past four years have given much attention to this new branch of agricultural industry, and the result has been that within the last two years nearly, if not quite one-half the sirup consumed in the county has been manufactured at home. The quality of the sirup exhibited at the late convention was equal to the best golden sirup from New Orleans, free from any unpleasant flavor, and more pleasing to our taste than any other sirup except the maple. Mr. John Masters, of Dover, brought us two gallons made by himself, which cannot be surpassed in any market. Mr. Masters has also made some very handsome sugar. There was a very large amount of cane lost, owing to the scarcity of the mills. Messrs. Miller & Christman sold about one hundred, and all they were able to manufacture. We trust there will be mills sufficient for the coming season."

There is no question that Sorghum sirup for cooking purposes is more valuable than that made from cane. It appears to give a lightness to the pastry not otherwise found, but for table use we prefer the cane golden sirup. We have never seen any clarified like the golden sirup, and cannot therefore speak of it from personal knowledge. We acknowledge to a greater faith in its sugar making value than formerly. It has now become to the prairie farmer what maple orchards are to the timber sections, a necessity and a profitable investment.

Ed.

[From the N. Y. Evening Post.]

Illinois and its Elements of Prosperity.

There are two laws, distinct in their nature, which seem to have controlled the growth of States up to this period—the natural increase of a fixed population, and growth by immigration. Those States which from natural causes have retained both of these elements of growth, have reached and held the first positions; but in the majority of cases, increase by immigration is felt chiefly in the early period of the existence of a State, and it then depends upon the natural increase of its own population for the maintenance of its position and power. It requires a combi-

nation of most fortunate circumstances to retain, for any considerable period, both these elements of increase in one State.

The State of Illinois seems to present elements of continuing prosperity which no other State possesses in the same degree. The average increase at each decennial census, from 1820 to 1860, has been 156.79 per cent., never exceeding 367 per cent., never falling below 70 per cent., which was in 1850, and rising in the next census to 101.10 per centum. From the twenty-fourth State, in 1820, it has risen to the fourth position in 1860, and it will attain the third if not the second in 1870. Its growth has been more regular than that of other prominent Western States. It has never shown the marvellous sudden growth exhibited by Ohio and Indiana, and it never will be reduced to the sudden falling off which we have seen in those States. Indeed it may be doubted if any single State possesses so many of the elements necessary to continue for an indefinite period its remarkable advances as the State of Illinois. It does not, like other States, suffer from the high price of lands, or the fertility of soils beyond its western borders. In both of these respects it has advantages, to say the least, equal if not superior to any other part of the country. It is free from the long and severe winters which every year are becoming more burdensome and distasteful to the northwestern farmer. Extending over six degrees of latitude, it embraces nearly every variety of climate, producing tropical fruits, and even cotton in a small way in the South, and the best winter grains in the North. By its location it is free from many of the difficulties that must attend the present state of public affairs, and is daily sought as a home by respectable families from every part of the country, south and north, east and west. More and more its lands are going into the hands of small holders, and farms of forty and eighty acres are sought, where the poorest settler, four or five years since, thought he must have hundreds or thousands. The fertility of soil and the extent of its products are marvellous, and when we couple the equally surprising increase of population with its agricultural products, and reflect that upon the principles advanced by Sir Archibald Alison in his profound Essay on "Population," and Adam Smith in the "Wealth of Nations," both predicate the foundation of manufactures and commerce upon surplus products of soil, we may anticipate for the future not only the maintenance for the future not only the maintenance of its past advances as an agricultural State, but the introduction of new and subsidiary avocations of the people, that will fully maintain its relative advances in the line of States exhibited by the late census.

The year 1861 will give to the prairie State thousands of new settlers—immigrants not only from the East, but the South. Even Wisconsin will send a large number to open up fruit farms in the centre and south part of the State. The Fox, the Rock, and the Mississippi rivers, will not long pour out their wealth of waters for nought. The first two rivers form a series of

water powers of great volume, while the latter at Moline is scarcely second to that at Niagara for the propelling of machinery. With these advantages the State cannot fail of becoming in a short time, not only the first in agriculture, but must take a high stand as a manufacturing State also. The iron and copper of Lake Superior must also meet the cheap coal from LaSalle, at Chicago, where rolling mills, smelting works and vast manufactures of iron must be put in operation.

The lead and coal mines are becoming great industrial institutions. Aside from the drift copper, we have no mines of that metal, nor is our iron ore of any particular value, though considerable blowing has been had over it, but truth impels us to this statement. Porcelain and fire clay abounds, with abundance of sand for glass. Where the farmer and railroad companies do their duty in the planting of timber belts to check the sweeping winds and to break the monotony of the long prairie slopes, we shall have new attractions for the mechanic and the man of capital who may wish to make comfortable homes among us.

Ed.

Postal Regulations.

The postage on letters conveyed in the mails from any point east of the Rocky Mountains to any State or Territory on the Pacific coast to any point east of the mountains, has been fixed by the present law at ten cents. Heretofore, letters conveyed by the Isthmus routes have been subject to the ten cent rates, while those carried overland between Missouri and California were only subject to three cent rate.

Horticulturists and pomologists will be pleased to learn that by the new postal regulations, seeds or cuttings are classified as mailable matter, and are to be charged with postage at the rate of one cent an ounce, when sent under fifteen hundred miles, and two cents an ounce when sent over that distance.—*National Intelligencer*.

Hurrah for Uncle Sam; this is just what we have been praying for, for some years. We will no longer be compelled to buy old garden seeds at home, when we can order from a distance. Seedsmen hereaway will make a note of this and see that they hereafter keep good seeds. Sixteen cents a pound from the seed gardens!—won't we have plenty of vegetables the coming summer.

Ed.

—An inn-keeper observed a postillion with only one spur, and inquired the reason. "Why, what would be the use of another?" said the postillion. "If one side of the horse goes, the other can't stand still."

The Farmers' Future—Prospects of Prices for Farm Products.

If we read aright the signs of the times, our agricultural friends are about to enter upon a career of unexampled prosperity. We believe that for some time to come, *everything the farmer can raise will bring good prices.*

In regard to the unhappy secession troubles that are now afflicting our country, we think that they will pass away without any serious conflict by arms. Still, there will undoubtedly be *quite an army* in the field, both in support of the regular United States government, and also in support of the bogus Confederate States of North America. All these men, enrolled as soldiers, will have to be fed. Many of them will go from the farm to the army—from being producers they will become consumers. The effect on prices of farm products by these quasi-war movements will be to raise them very considerably.

But there is another reason why farmers may look for good prices to be maintained. Congress has passed a new tariff law, the effect of which will be to stimulate manufactures and unlock the wheels of industry at all our furnaces and factories. In this *army of laborers* that will be engaged in all kinds of manufactures, encouraged and protected by the new tariff, the farmer will find a new demand for his flour, pork and beef.

We hope, then, that no farmer will sit down despondingly, making no efforts for the future. All who arouse themselves and make preparations for raising a large crop may depend on realizing excellent prices for all they can turn off from their farms.—*Ohio Valley Farmer.*

The above is good advice in the main. Whether peace or war follows, the above arguments hold good. The West must and will feed both the South and the East. Fertility of soil and a genial climate for the cereals give the Northwestern States an advantage that is irresistible. We do not look to a peaceful result to this secession matter—the crash of arms must sooner or later settle the question—it may be staved off for half a dozen years, but it must come sooner or later, and as it is not likely in any event that our State will be the field where the quarrel will be tried, hilt to hilt, we must be largely drawn upon for supplies. We shall hope that better councils will rule, but in the madness of the hour it is difficult to foretell the end. Let us, one and all, attend to our business, keep out of debt, show a spirit of peace, and cultivate the social relations, and we will be comparatively safe from harm. The business and social relations of the border States on both sides of the Ohio is too intimately connected and interwoven to make them hostile, let what may come of the South or the North. It is not our purpose or our province to discuss political questions, and as we are no politician we could not if we would; at the same time we have

no great confidence in the integrity of the partisan spirit now so rife throughout the newspapers of the day. Judging from most of our exchanges we should suppose that secession was the one great staple of the country, and wonder why they do not set a tariff upon it.

Elder Bushes vs. Curculio.

A few weeks since I visited a garden in this vicinity, and saw several plum trees heavily laden with fruit. I was requested to examine and see if I could discover any traces or marks of the curculio. I did so upon fruit on the trees and on ripe fruit that had fallen off and lay upon the ground. I could discover no marks and no larvae in the fruit. I gathered up fruit from the ground and carried it home; it was all perfect. I thought there must have been great pains taken to kill the insects; but there had been none at all. Having raised plums more or less for twenty years in Michigan, but never without the effects of the curculio more or less, and sometimes to the entire destruction of the crop, you may judge of my surprise when informed that all that had been done was to procure common elder bushes and tie them to the branches of the trees. This had been done every few days from the time the fruit was fairly set until full grown. This man has lived upon the place five years. The trees were upon the place—bearing trees—when he took possession; the first two years he tried to save his fruit by shaking the trees and gathering up the curculios upon cloths spread under them. He had very poor success; the fruit was nearly all stung and dropped off prematurely. He was in despair the second year, when he was told by (as he said) “an old Frenchman” that if he would put elder bushes into his trees he would raise fruit. He has tried it three years with the same success—a full crop of perfect fruit.—A. C. HUBBARD, in *Michigan Farmer.*

Those having elder bushes at home would do well to give the above a trial, though we confess to some weakness to a belief in its efficiency. We have removed our plum trees within the *hen limits*, that is, that neutral space that lies between the house and the hennery, and hope thus to have good crops of plums. Some cheap and effectual remedy must be had against this worst of all fruit depredators. We are tired of nostrums, and want something that can be used by the million, and one that will not cost more than the fruit is worth when protected.

ED.

—A rough individual, whose knowledge of classical language was—not complete, had been sick, and on recovering was told by his doctor that he might take a little animal food. “No, sir,” said he, I took your gruel easy enough, but hang me if I can go your hay and oats.”

The Culture of Flax and Hemp.

An attempt is to be made at Rockford to introduce the culture of flax for its fibre, or as it is now termed fibrelia or cottonized. We have before us a pamphlet of eight pages setting forth the progress and improvement of the enterprise. With the abundant water power at hand, which can be cheaply applied to this use, we think Mr. Clemens has made a good selection. As the process is new to our readers, we will give it entire :

DESCRIPTIVE SKETCH OF S. A. CLEMENS' IMPROVED PROCESSES ON FLAX.

The new system of preparing flax has primarily in view a near market for raw flax straw, ingathered with the least expense to the farmer—the prosecution of the processes of preparation in central establishments, equipped and organized for operation throughout the year, and the shipment of the material to the linen factory in advanced stage of manufacture.

As essential, both to save the labor of pulling the crop in the old way, and to facilitate the subsequent treatment of the fibre, the flax when the seed is ripe, is cut by the harvesting machine. This is easily done with any of the combined reaping and mowing machines which can be adjusted to cut close to the ground, and allow the flax to be discharged from the platform in gravels, like wheat. If the ground has been well prepared—thoroughly pulverized by the harrow at seeding, and followed with a good field roller, the flax may be cut in this way, low enough to save all the fibre. In drying weather, the gravels of cut flax should be immediately bound in small bundles, with care to keep the stalks straight, the butts even, and pick out the weeds, if any are present. Then, standing the bundles on end, in small shocks, a few days of prairie sun and breeze serve to cure the straw and seed, when it is ready for stacking, either on the farm or in the stock yard of the neighboring flax mill.

At the mill, by a machine, which may also be made portable, and driven by horse power for farm use, both the seed and branching seed ends of the flax are simultaneously removed, the flax bolls crushed, and the seed cleaned, as fast as a workmen can pass the bundles. The straw in bundles, thus divested of seed ends and roots, is ready for packing in large fermenting vats or tubs. These are then filled with water sufficient to cover the flax, and the temperature is raised to about ninety-five degrees, by the admission of steam. At the expiration of two or three days, the fermentation of the contents of the vats, made sure at all seasons of the year by the uniform heat, has sufficiently decomposed and made soluble the resin and coloring matter of the fibre.

This method, called steep rotting, is extensively adopted in Ireland, and used both on flax and hemp in this country. Hitherto, the steeped flax has been dried by spreading on the ground, or in large drying houses, heated by costly ranges of steam pipes, without provision for the removal of the soluble substance before drying, and thus prevent discolorations.

By the new system, the wet flax, on removal

from the steep vats, is carefully spread in successive overlapping layers, upon an endless carrier or apron. This carrier is at one of a long train of apparatus and machinery, the parts of which operate in unison, and through which the flax progresses in a continuous sheet. Passing from the feed table, the flax is first subjected to a washing process, which removes the soluble gum and coloring matter, still soft from decomposition in the vats, and leaves the fibres nearly white. Next in course the flax passes through pressure rollers for the removal of water, and thence into a drying apparatus, where it is exposed to currents of hot air. The heat for the evaporation of moisture from the flax straw, is derived from a spacious hot air furnace of special construction, which, when steam motive power is used, arrests the escape heat on its passage from the boilers to the chimney. Thoroughly desiccated in the dryer, the flax straw next progresses through breaking and cleaning machinery, of well proved action, which reduces the woody part into fine shives, and separates them from the fibre, without injurious abrasion to the latter, or material disturbance of the parallelism of its filaments. From this, the fibrous sheet, still connected, passes through combing, condensing and gill-drawing machinery. And finally, the material is delivered from the train in a continuous sliver, or band of clean, gill-combed flax, running into a can, without waste of fibre, and ready for the drawing frames of the linen mill. When the flax sliver is to be shipped for market, it is run from the cans upon a coiling machine, forming packages which are pressed and enveloped, and which, on being opened, and suitably supported, freely run the slivers to the drawing frames of the distant factory.

The only manipulations which the flax receives after removal from the steeping vats, is in the operation of spreading the straw upon the feed apron of the train. This lays the foundation of the yarn, the subsequent operations being automatic, save in transferring the cans of sliver from one machine to another, in the linen mill. The effect of washing the straw for the removal of the soluble matter is not only to add in preserving the natural light color of the pure fibre, and leave it of a silky softness which improves its properties for manufacture, but it also aids the mechanical separation of the woody fibre, and saves much expense in bleaching the fabric. Compared with the best method hitherto in use, the new system saves no less than eight successive handlings of the flax, some of which are tedious and expensive, besides converting more than one-half of the material into tow.

By the new way, one ton of good flax straw will produce four hundred pounds of fiber. At ten dollars a ton for the straw, in connection with the value of the seed, flax is a more valuable crop for the Western farmer than corn or wheat. A flax mill on the above plan, of capacity to produce daily one ton of marketable fiber, is erected at the outlay of about twenty thousand dollars. Operated by sixteen hands, the shives being available for fuel, the daily running expenses may be estimated at less than twenty-five dollars. With a margin, the cost of preparing the flax is thus one cent and a half a pound, which with

two cents and a half paid the farmer for the raw stock, the total cost of the product of the mill is four cents a pound. Its market value may range from nine to fifteen cents, according to quality of stock. The linen mills of Great Britain, annually use one hundred thousand tons of flax, most of which is imported, and our eastern mills chiefly depend upon foreign supplies, importing annually about \$200,000 worth of flax, at the average cost of fifteen cents a pound. The plentiful production of American flax, will readily turn manufacturing capital to the erection of linen mills near the field of supply. The material when delivered to the linen factory in the silver, is already half manufactured, and can be spun and woven for less than three cents a pound—the average cost of manufacturing cotton from the bale. The plantation cost of cotton, at the present value of slave labor, is not less than eight cents a pound, and the market price averages twelve cents. Taking into account the greater density of flax, which requires about thirty per cent. more weight of material than cotton, in yarns of given fineness, we have in the foregoing unmistakable assurance that linen fabrics can be made as cheap as those of cotton. The greater durability of linen makes it economical for use at more than two-fold the price of the other.

All the details of these new labor-saving processes have been practically proved, and they afford a basis, and the only one yet laid, on which flax can successfully contend with cotton for the "kingdom." But, to prosecute the business, at the outset, on a scale to realize the minimum cost of production, is beyond the usual limit of individual means applied to new enterprises, and, with all the promise of profitable investment, it yet calls earnestly for a wide co-operation of the friends of free labor. With such associated aid the existing perfection of modern linen machinery, and the ability, by the new system, to prepare the material at trifling cost, soon can make us independent of slave-grown cotton. This alone, it is believed, may afford a peaceful solution of the great question of our times.

How to Save Frozen Trees.

In the fall of 1854 we made a purchase of trees at Syracuse, and in consequence of late shipping and the crowded condition of the railroads they did not arrive until late. Some four or five bales of Dwarf Pears and Plums were sent to the wrong warehouse and could not be found until the middle of January; and then on the north side of a pile of coal in a yard near Wells street bridge, in Chicago. They had been exposed to all the snows and frost, but out of the sun, and from the time of their freezing up had probably been in a frozen state. The snow was then several inches deep, the sleighing good and the weather clear and cold. They were taken to our nursery then at Leydon, the snow cleared off from a space in the garden, the crust of frost some six inches deep broken up, and the trees put in, the tops

were slightly covered with earth and a thick coating of straw put on, and kept in place with rails and billets of wood. In the spring these trees come out in fine order, and we do not recollect of losing one of them. Again, on the 23d of November last, we received several packages of dwarf pears, two hundred of which we re-packed and shipped south. Before they left this station they must have been frozen solid, for the thermometer went eight degrees below zero. It was nearly a week before their arrival at destination. We had given instructions how to treat them, and the direction was complied with, with the addition of applying a quantity of half rotted manure, which commenced heating before the trees were taken out this spring. They appeared to have suffered none from any other cause than the manure, and but few of them from that.

The conclusions that we derive from these and other similar trials which we might give, is, that it does not injure well packed trees if the frost can be drawn out in the ground, by covering up root and branch.

Oil Trade and the Railroads.

The opening of the oil wells in Pennsylvania and Ohio has been the cause of materially increasing the receipts of the railroads. There is no telling how much fare has been received by the different companies from people taking on oil business, but the gross sum must be immense. The Lake Shore road, from Erie to Buffalo, has reaped quite a little sum out of the traffic. In the month of December 4,510 barrels; January, 14, 316 barrels, and in February 8,720 barrels, making a total of 27,546 barrels of oil, were shipped by this road to Buffalo and eastern markets. Think of twenty-one car loads, or 1,050 barrels of oil, on one train! There have also been shipped over this road two hundred and seventy steam engines for pumping the oil. The total value of these shipments amounts to over \$400,000.

As an item of interest to oil men, the *Pittsburg Post* says: "The importation of foreign coal oil, under the new tariff, will be almost impossible. This fact is of interest to numbers of Pennsylvanians who have recently invested in the oil business. The provisions of the new tariff impose a duty 'on Kerosene oils, and all other coal oils, of ten cents per gallon.' Foreign producers, under these circumstances, will have to look elsewhere than the United States for a market."

This oil business is playing smash with the distiller; the days of burning fluid is nearly past, as kerosene takes its place, giving a better light and much more safe from accident. Every year brings some new change, and the laggards are behind. Slop feed beef and pork must give place to the farm fattened, and the smoke of the distillery will cease to go up.

Ed.

The Hog.

The following *jew desperate* is an extract from a humorously poetical report on swine, delivered by J. C. Milne, Esq., editor of the *Fall River News*, at a recent cattle show in that vicinity :

We sing the Hog !—not those in common styes,
But that which roamed unpenned in Paradise,
And furnished—next to that “best gift,” dear MAD-
AME,

An extra SPARE RIB for old Father Adam.
But if you doubt, when Eden's garden fair
Bloom'd fresh and lovely, that the Pig was there,
You'll certainly allow (please don't forget),
He went with Noah IN, out of the wet.
Yet there are some who this plain fact dispute,
And out of that old ark would crowd the brute !

Said my friend Dean to me, the other day,
(My friend the treasurer,) in his TAUNTIN' way,
How can you prove, sir, that in Noah's boat
The hog was gathered with the sheep and goat ?
Of that, quoth I, one cannot be mistaken,
For wasn't it THEN that Noah SAVED HIS BACON ?
And did he not, though on the surging brine,
Have his HAM there when'er he chose to dine ?
Dean ceased to BRISTLE—'llowed 'twas even so,
The “critter” figured at that Cattle Show !

Oh, much abused and much despised beast !
Men slight thee most who know thy merits least ;
Who would make LIGHT of thee, should TRY thee first,
Then with thy praise they'll inter-LARD their verse.
Without thy presence at the festive board,
Tickling the palate of creation's lord,
In bake or fry, or even in stew,
Pray what could we, or our good housewives do ?
Sore grief would seize on many a bosom stout,
If by perchance the hog should once “step out ;”
And life become, 'mid all its varying scenes,
Like Sunday morning without PORK AND BEANS !

On beef and mutton Englishmen expand,
But pork's the crowning glory of our land—
Pigs are true patriots—in the Buckeye State
They die to make her Cincinnati great.
Pork to the Jew is every way unclean,
Howe'er prepared, with or without his bean.
Though Paul felt free from Moses here to swerve,
The Jew still deems it binding to observe,
We go with Paul—as every one supposes—
As for the JEW—why he may go to—MOSES !

From the Carlyle (Ill.) Reville.

Rohrer's Commercial College.

On a recent trip to St. Louis, we paid a visit to the celebrated “Rohrer's Commercial College,” located on the corner of Fourth and Poplar streets. The enormous success that has attended the efforts of Mr. Rohrer is a proof of the completeness of his system, and the assiduity with which its principles are inculcated. Nothing is more neglected in this country than a thorough business education, for in our Schools and Colleges scarcely the rudiments are taught.

No man is properly fitted for commercial or official station unless so instructed ; and to supply the want so widely felt Commercial Colleges were instituted. Foremost in this new field of labor

was Louis Rohrer, and he now stands deservedly among the foremost in the land. All the chairs in his College are filled by able Professors, some of whom have a world-wide reputation.

Bookkeeping, in all its many intricate branches, is under the immediate personal superintendence of Mr. Rohrer, aided by competent assistants and accountants. The chair of Mathematics is filled by Prof. Chas. Gimbel, a gentleman of rare experience and ability. We disremember the name of the gentleman who has charge of the Commercial Law Department, but we know he is a gentleman of marked legal acumen. The department of Penmanship is under the control of Prof. A. E. Holcombe, the most finished and beautiful penman we have ever seen. We have upon our table the most magnificent specimen of chirographic art imaginable, executed by this gentleman.

His system is thorough and complete, while it is graceful and easy. But we cannot speak of this institution as we would wish in a newspaper paragraph. We can best serve our readers and the College by recommending all to procure a catalogue and read it.

A person looking over the catalogue of professional gentlemen at the bar, with a pencil wrote against the name of one of the bustling order : “Has been accused of possessing talents.” A wag, seeing it, wrote underneath : “Has since been tried and acquitted.”

Morning Glories.

They said, “Don't plant them, mother,
They're so common and so poor,”
But of seeds I had no other,
So I dropped them by the door ;
And they soon were brightly growing
In the rich and teeming soil,
Stretching upward, upward, upward,
To reward me for my toil.

They grew all o'er the casement,
And they wreathed around the door,
All about the chamber windows,
Upward, upward evermore ;
And each dawn, in glowing beauty,
Glistening with the early dew,
Is the house all wreathed in splendor,
Every morning bright and new.

What if they close at mid-day,
'Tis because their work is done,
And they shut their crimson petals
From the kisses of the sun,
Teaching every day their lesson,
To my weary, panting soul,
To be faithful in well doing,
Stretching upward for the goal.

Sending out the climbing tendrils,
Trusting God for strength and power
To support, and aid, and comfort,
In the trying day and hour.
Never spurn the thing that's common,
Nor call these homee-flowers poor.
For each hath a holy mission,
Like my glory o'er the door,

THE ILLINOIS FARMER.

BAILHACHE & BAKER.....PUBLISHERS.

M. L. DUNLAP, EDITOR.

SPRINGFIELD, APRIL 1861.

Editor's Table.

THE ADMINISTRATION ORGAN.—We hope our readers will appreciate the selection of the ILLINOIS FARMER as the pet organ of the rail splitting party. Politicians may go to grass while the FARMER presents the working programme of the administration. Our party is not a sectional one, the term rail splitter only having reference to the early settlement of the country before board fences and hedges came into use, and it now includes all, whether they use rails as in the primitive time, hedges, boards and posts, or the wire, whether put up in straight rods or woven into fanciful forms. While the political papers are all groping in the dark we have the pleasure to lay before our readers the plans and actual intentions of the cabinet, together with no inconsiderable advice what course should be pursued. Coercion is decided upon and is to be incorporated in every department. Farmers should at once enlist their companies and have them duly officered and put in course of training. The first fire should be made upon the corn fields after the stalks and rubbish have been raked up into breast-works. Do not play the midnight marauder, but when the sun has made the rubbish dry apply the torch and thus sweep away the hiding places of your enemies, the chinch bugs and other contemptible insects that feed upon your crops. As you are to invade the south early in the autumn, you will plant largely of corn, oats, wheat, potatoes, etc. You can grow corn and ship it to the south cheaper than they can grow it, or rather as other products pay them better, they will grow cotton, sugar, etc., and purchase corn of you, so of flour, potatoes and other products that delight in the rich drift soils of the prairie.

It would appear that Cairo is a more natural depot for your supplies than New Orleans. As we have set forth in another place, it is the natural

point to which you should consign your southern supplies, and from whence you should receive the plunder obtained from the fair fields of the sunny south, whether in the shape of cotton or groceries. The northern array of manufacturers who are busy arming the commercial battalions will receive their supplies through Chicago and Toledo as usual. The administration is particularly anxious at this time that you look well to your neat stock, for between hay and grass is always more or less a critical time. If you let them out in the fields or on the prairie through the day, see that they are well fed at night and carefully protected from cold storms; remember that the good name of Illinois beef is not to suffer in the markets of the world. The President assures us in a private dispatch that our ministers and consuls will be instructed to look after this matter, and by dining alternately on Illinois and foreign beef to keep well posted as to its quality. We have recommended to the Secretary of War to direct the building of additional fortifications at Cairo for the storage of grain and its more convenient handling, and to the Secretary of the Navy that the craft on the Mississippi be so constructed that they hereafter carry grain in bulk instead of in gunnies, as at present.

On the subject of seeding down to grass, "what crop shall we seed with" has created a regular rebellion, or at least a state of anarchy exists. As this is rather a local question the cabinet will take no part in it at present, but continue to receive reports. The one from a "Farmer of Du-page county," in the last *Prairie Farmer*, they look upon as pacific in its character, at the same time they look upon the subject as a little mixed. They would suggest that April is rather late to sow with oats in central Illinois, but would rather risk plowing the stubble and sowing in August. Old seed is to be looked upon with suspicion. We think the question will find a peaceful solution, and our farmers be hereafter saved from serious loss in seeding and our seedsmen receive less condemnation for bad seed. The planting of orchards, the improvement of our homes, more barns and farm buildings, the covering of corn cribs, the housing of implements and an economical outlay of labor have been the subject of several cabinet councils, and it is hoped that improvement on all these subjects will receive prompt attention. The south, the north and the east have their eyes turned toward the teeming prairies of our State, and even now they are spying out our weak places. If we are judicious and treat these new comers with kindness we will

make them friends; if not, they will pass on to other points; bribe them by selling them land cheap, and extend to them all needed facilities to make homes among us.

CHESTER WHITE PIGS.—At this time there is a large enquiry for this new breed of hogs, and we have several enquiries in relation to them on our list. As near as we can learn, a pure bred "Chester white" is a cross of the Suffolk, with the common white hog of Pennsylvania, or for that matter, any other State. We have two fine sows, bred in this way, that suit us to a fraction; at least, we would not pay express charge on one to exceed five cents a pound, live weight. The truth is, there is not a county in the State that need send twenty miles for the best breed of hogs. We like the Chester white because he has more hair on him and looks as if he could stand the cold better than the full bred Suffolk. There are plenty of these Chester whites in our neighborhood, and right fine pigs they are. We put up a ton and a half of pork from a litter of them last fall, and now we have a most splendid lot of hams cured *a la* "*Chicago sugar cured*." We hope none of our readers will send to Chester county after pigs, for we will guarantee just as good pigs near home, and with just as good a pedigree, to-wit: "White hogs, legs slightly longer than the Suffolk, more hair and longer bodies," somewhat resembling the Suffolk, but with a cleaner skin. Won't some of our readers who learn by this that they have the "pure bred?" advertise them. Suppose we call them the "Illinois Beauties," and see if we do not soon have a foreign demand at twenty-five dollars, the price for six weeks old pigs. It is time that we got back some of the money gulled from us by breeders of pigs in other States. Who will get up a herd book of "pure bred swine;" it must be did, for the whole country is agape for the best breed of pigs, and our pigs have been crossed and recrossed so often that the "prairie swine," "the wood scambler" and the "shark" have, we fear, been lost, swallowed up in the vortex of porkopolis or mizzled on change.

CASHMERE GOATS.—Mr. Kendrick, of Chicago, has fifteen grade Cashmere goats, which he purchased in Tennessee last fall, from which he is breeding, on a farm near that city. He proposes to test their profit in this climate.

MATURATION OF FRUITS.—The maturation, as it is called, or the sweetening of winter fruits, when stored up for their preservation in straw, is the result of a true fermentation. Unripe apples and pears contain a considerable amount of starch, which becomes converted into sugar by the nitrogenous constituent of the juice passing into a state of decomposition, and transmitting its own mutations to the particles of starch in contact with it.—*Liebig*.

There is a natural period of ripening of fruits, as among apples, we have summer, autumn and winter. It would be impossible by any ordinary process to winter the early harvest, as it would be to have the Golden Russet in eating July direct from the tree. For this reason those planting orchards cannot be too careful in keeping a record of the varieties planted, and to see that they are true to name. We will suppose a farmer should grow the Farnese, Winter Russet, Yellow Bellflower, Raule's Jane and Willow Twig, and without knowing anything further than that they were all winter apples, put them in the same bin, he would find a pretty mess before the end of January, by what he would call the premature decay of a portion of them, but by putting them separate and knowing the time at which they severally mature would have each in its greatest perfection. We therefore say to all, label your trees at the nursery, and make a record where each variety are planted, so that when they come into bearing you can put them away for the proper time of ripening. If you depend upon recognizing them when they come into bearing you will be mistaken, except as to a few varieties. Our best fruit men can only identify a limited number; the effect of soil and location changes them to some extent—therefore be sure and keep your record.

HOGS NEXT WINTER.—The low price of corn last fall and the high price at which pork has been sold during the winter just closed, has induced farmers all over the country to fatten all the hogs that could possibly be made fit for the market. In this way alone could they get anything like a fair price for their corn. The consequence is that the number of stock hogs now in the country is unusually small, and the amount of pork that can be made ready for killing next fall and winter cannot be very large. In this case, prices will most probably again be high, and every farmer should do all in his power to increase the number of his stock hogs. After all, whether corn is high or low, the farmer generally gets best paid for it in the staple of pork.

ATTEMPTING TOO MUCH.—The great trouble in this world seems to be attempting too much. No matter how well off a man may be, he must try to do more than he is able to. We know of many farmers that are always in debt, and everything lying loose around their premises. The reason of this is, that they never have time to finish up any one thing as it should be done. A fence is half finished, something else needs attention, hurrah, boys; all hands quit making fence, and go at something else, losing time enough in replacing tools, in getting others, and moving from one unfinished job to another, to nearly complete the work. He goes to the nursery, gets a hundred trees, half plows the ground, or nine times out of ten, don't plow it at all; says, "I'll plow it by-and-by, when I get time," half sets the trees, and the consequence is, one half or two-thirds of them die. Their hedges are half set, and of course more or less of the plants are killed by the drouth, leaving unsightly gaps; his corn is half tended, because he had twenty acres when he only should have ten; his wheat is half sown, ditches half dug, and the water overflowing where the ditch is most essential; gates are off the hinges, and the chickens roost on the reaper for want of a better place; and yet, this same man may have an eye for beauty, may go to agricultural fairs and shows, attend conventions, and there urge the necessity for better culture and less land, more flowers and less corn, but his preaching from home and his practice at home are in nowise related to each other.

Ask him why his corn did not turn out better, "Well, a piece that was plowed deep and well tended, turned out twenty bushels to the acre, and the other piece would have turned the same, but I really hadn't time to plow it again; had to haul wood or fix my line fence." It does very well to keep your irons in the fire, but have them in just far enough to heat as you can work them. Don't have a dozen all hot at once, and spoil them all by not having time; cultivate a little land and live comfortably. Don't break up forty of that eighty acre pasture when you already have more land broken up than you can possibly cultivate and do it well. *

HOME AND SCHOOL JOURNAL.—This is a valuable paper on Education and Temperance, and should receive a wide and liberal support. It is probably one of the cheapest of our western family papers. Published monthly at fifty cents a year, by Eberhart and Company, Chicago.

THE WAY TO DEAL IN TREES.—Mr. Riley Hoskinson, of Rushville, Ills., has contracted with us for all the trees he procures orders for. We will take this opportunity to say to those of whom he solicits orders, that all orders filled by us for Mr. H. will be such trees as parties would receive from us if they sent their orders directly to us. All orders are filled and packed with care.

LEWIS ELLSWORTH & Co.

Naperville, March 3d, 1261.

That's the doctrine, and the only way we shall drive out the tree peddler. Instead of sending out agents, or selling to peddlers at wholesale, orders are filled by such men at the nursery with the same care and at the same price as though the order was sent direct. The nurseryman selects and packs the order of each customer, and there is no way in which the agent can tamper with the labels. We have adopted this practice for the past two years, and are pleased with it. Nurseries like those of the Messrs. Ellsworth & Co., cannot retail their vast stock, and hence local agents like Mr. Hoskinson must be employed to take orders and collect the bills. This makes a division of labor, and is an economical way of doing business. It is one safe for all parties. The agent receives for his services a per centage commission, the trees and plants are duly packed and shipped, and by sending all the packages to the agency at one time, a saving of freight and a greater certainty of safe arrival at destination is secured. Those who have not tried this system we hope will not delay. Give the tree peddler, who deals on his own hook, a wide berth, and send your orders direct to the nursery, or through a reliable, bona fide agent. In contrast with this, some of our eastern nurseries, who sell the dealer his stock at wholesale, and the dealer affixes the labels to suit himself, the nurseryman giving a certificate that the trees when delivered to the dealer are true to name, but that is no assurance that they will be, after the peddler has put on his own labels. Will our tree planters take this gentle hint and consult their true interest?

THE PEACH CROP IN EGYPT.—G. H. Baker, of Cobden, writes us under date of March 18th; "We have had quite cold weather since you was here. Some suppose that most of the peaches are killed, but I think there is enough left for a good crop. My tamato plants have suffered severely in the hot beds." Further north where the buds had not started, the late cold term could have made no impression on the embryo fruit. The large quantities of snow to the north will give us a backward season, but from our experience we may look for a good growing one when it does open.

THE RURAL ANNUAL AND HORTICULTURAL DIRECTORY FOR 1861.—The sixth annual volume of the *Rural Annual and Horticultural Directory* is on our table. To those not acquainted with the previous numbers, we would say, that the *Rural Annual* is a handsome book of 120 pages, published in Rochester, N. Y., at the office of the *Genesee Farmer*, and designed to furnish a large amount of valuable and interesting information in a cheap and permanent form. A new number is prepared each year, containing entirely new matter. Among the contents of the present number we notice treatises on the Farmer's Kitchen Garden, Shade and Ornamental Trees, Management of Window Plants, Cultivation of Immortelles or Everlasting Flowers, Ornamental Hedges, Sulphur for Mildew on the Grape, designs for Farm Houses, Cottages, Suburban Residences, Barns, &c., Ornamental Water Fountains, Construction of Gates, Calendar of Operations, Cultivation of Pears, with many other articles of interest and practical value to the Farmer, the Fruit Grower, and the Horticulturist.

It is illustrated with 80 beautiful wood engravings.

The *Rural Annual and Horticultural Directory* for 1861, will be sent, prepaid by mail, on the receipt of 25 cents in postage stamps. Address JOSEPH HARRIS, publisher of the *Genesee Farmer*, Rochester, N. Y.

MAPLE SUGAR.—The prospect is now that the amount of maple sugar made in this vicinity this year will be much less than has been made in either of the two preceding years.—*Sanilac (Mich.) Leader*, March 16.

The prospect of a favorable season for making maple sugar looks dubious. Only a small amount has been made at this time, and the sugar season is nearly closed.—*Hillsdale, (Mich.) Standard*, March 19.

We are informed by the sugar-makers that so far this season the sugar weather has been uncommonly poor, and everything indicates a poor sugar season, a small amount having been brought into market as yet.—*Hastings, (Mich.) Pioneer*, March 16.

When at Cobden early in March we saw quite a large amount of maple sugar in the stores. The sugar season had closed, and the yield had been very good, but the average per tree is much less than at the north. The price was about double of that of good Muscavado sugar. We were surprised to learn that in this part of the State the yield is better than in the center, or even the north part of the State. The maple in this part of the State produces so small a quantity

that little attention is paid to it, while in the heavy timber districts of Indiana, on the same parallels, the yield is very fair.

OFFICE STATE AGRICULTURAL SOCIETY, }
Springfield, March 9th, 1860.

MR. EDITOR: In reply to several inquiries, let me say through your paper, that the law passed by the late Legislature appropriating \$100 per annum to each county agricultural society in the State, merely revived the law of 1857 on this subject, so far as the action to be taken by such societies to obtain it is concerned. The same certificate of the County Clerk is required. The appropriation will continue year after year until the same shall be repealed.

Yours truly,
JOHN P. REYNOLDS,
Cor. Sec. State Ag. Society.

We learn that no appropriation was made for either the State Horticultural Society, the Southern Illinois Horticultural Society or the Mechanics' Institute of Chicago. All of these are valuable institutions and should have received the fostering care of the State.

SOME GRAIN.—In the great warehouses of Sturges, Buckinham & Co., on the Illinois Central depot grounds, says the *Journal*, there is at present in store the amount of nearly a million and a half bushels of grain. In warehouse "B" there are 214,585 bushels of spring wheat, 567,534 bushels of corn, 21,156 bushels of barley, and 7,873 bushels of oats; total, 801,148 bushels; or by weight, 22,682 tons. In warehouse "A" there are nearly 700,000 bushels of grain, and the quantity will increase until the amount in the other is reached, unless in a short time owners commence putting it on board vessels in the river. Thus much of the storage facilities of these two great granaries. Their handling capacity is well attested by the fact that last season fifteen vessels received their cargoes in one day. Figures like these will do to be placed alongside of the grain statistics of Chicago.

DWIGHT AGRICULTURAL SOCIETY.—The Secretary of the above Society writes us enclosing a certificate of membership conferred by vote of the Society. The officers are Jared B. Moss, President, S. T. K. Primm, Secretary, and Richard P. Morgan, Jr., Treasurer. Livingston is among the best agricultural counties of this State, and we may expect to see good results from this society. The population of this county number among its members some of the best talent in the State.

WHEAT GROWING COUNTRIES.—The New York *Tribune* publishes an interesting article upon the subject of the culture of wheat, and which contains some very valuable information.

It is an error to suppose that ours is the greatest wheat producing country. We do our full share, without doubt, but our system of agriculture is steadily exhausting our best lands, and in a few years a diminution of the yield will be apparent in our census returns.

Last year's crop is assumed to be 180,000,000 bushels, but the average is probably only 120,000,000. The average yield of other countries is as follows:

France,.....	191,422,248
Britain,.....	145,300,000
Two Sicilies,.....	64,000,000
Canada,.....	60,470,134
Spain,.....	46,914,800
Austria,.....	27,735,568
Sardinia,.....	19,975,000
Russia, ex. only,.....	18,921,776
Belgium,.....	13,350,000
Portugal,.....	5,500,000
Turkey, ex. only,.....	4,629,000
Holland,.....	3,000,000
Denmark,.....	3,000,000
Sweden and Norway,.....	1,200,000

Here is an annual production of over 606,000,000 bushels. If the crops of this continent are included, the total may be safely assumed to be 900,000,000, as the unascertained product of Russia and Turkey must be very large. No better evidence of the primary value of the wheat plant to the human family could be given than such an exhibition as this. It proves that where the highest civilization has been attained, there the greatest production is realized.

IT MAY, THEN, be safely asserted, taking the deficiency in the yield per acre in the produce of flour per quarter, and in the loss from the weather and the protracted harvest, that the wheat crop will prove to be one-third at least less than an average, or five to six million quarters deficient. This, with an annual consumption of nearly five million quarters beyond the native produce, will render necessary an importation of ten million quarters between the harvests. Such was the deficiency as estimated in the *Mark Lane Express* on the eve of harvest, a result, however, deplorable, that has fully justified our calculations—supported, as these were at the time, by so few of our cotemporaries.—*Ex.*

Eighty millions of bushels of wheat wanted to supply the deficiency of England, one-half, the annual short coming, and the other half from a short crop. With this fact staring us in the face, need we be alarmed as to our surplus—it will be wanted there; take the best possible care of it.

NUMBER OF TREES TO THE ACRE.

At 4 feet apart each way,.....	2,729
" 5 " " "	1,742
" 6 " " "	1,200
" 8 " " "	680
" 10 " " "	430
" 12 " " "	325
" 15 " " "	200
" 18 " " "	135
" 20 " " "	110
" 25 " " "	70
" 30 " " "	50
" 4 by 6 feet,.....	1,815

This last is a good distance for gooseberries, currants, grapes and raspberries, and the distance that we are setting the above fruits. Our orchard is set twenty-four feet each way. Dwarf apples and pears will do well at ten feet, and the May cherry at sixteen feet, six acres of which we are now setting. This is not the May cherry of Downing, which is a Morrello, but a krutish of the Early Richmond family, but better adapted to the west, in fact it is of Ohio origin.

WOOL PROSPECTS.—All the wool dealers in this city, and indeed in most of the towns east, appear to be of the opinion that the prices for wool this season are to be low. Yet it should not be forgotten that the same opinion prevailed among buyers and manufacturers at this time last spring, while the result did not confirm the opinion. Wool sold at a good and fair price all last season, and every one who speculated in it for a rise, made money.—*Chicago Democrat.*

Farmers near our large towns are beginning to turn their attention to both mutton and wool, with good prospects of profit, and were it not for the great number of worthless curs, wool growing would soon become a leading feature in the country, every farmer could then keep a small flock, and not only find a profit in the wool, but an economical and healthy food for his family.

RAT TERRIERS.—Mr. A. J. Honford, of Waukesha Wis., has a supply of rat terriers, of the best bred English stock, black and tan. His advertisement should have appeared in the January No. but somehow between us and the printers it became mislaid, and we therefore make the announcement at this late day. We have one of these puppies and find it one of the most active, busy little animals that we have seen. No sooner does a rabbit make his appearance about our nursery than he is nabbed up. Rabbits, rats, squirrels and cats have to keep outside of our premises. We could not well keep house without our ratters. Persons ordering from Mr. H., will raise no common curs we can assure them.

ED. FARMER:—In my younger days I came from England, where we had regular fairs for the transaction of all kinds of business, the buying and selling of stock, grain seeds, and agricultural implements, &c., and engaging all the help we wanted, both male and female; and I have long seen the necessity of something of the kind in this country, where seller and buyer could be brought together, obviating the difficulty of parties running all over the cauntry to transact business; also having a tendency to establish more regular prices. I have thought if a regular fair could be established in every county in the State twice a year, say about the 1st April for the spring, and about 1st October for the fall, it would be a great advantage to all business. I was glad to see that something of the kind was started in the north part of the State last year.

Yours,

EDWARD CLARK.

Sangamon Co., Ills., March 1, 1861.

There is no question but that fairs, as stated above, would be useful, and we think the time is not distant when they will be adopted in the more densely populated counties. The one at Dixon last spring was a practical success, and when we become accustomed to them, they will be hardly dispensed with. Sangamon and Morgan counties might lead off in this work and give the system a trial, which we have no doubt will lead to valuable results. In this way exchanges of animals can easily be made, and a vast deal of valuable information disseminated. We hope to see the system have a fair trial.

Ed.

WE ARE glad to learn that preparations are being made by our farmers generally to put in a large breadth of spring wheat. This is right. The ground is in an unusually excellent condition for wheat and the general opinion is, that both the fall and spring wheat this year will make a good crop. There are several varieties of spring wheat that yield as well, and weigh and sell as well as fall wheat. Try if possible to sow a good article.—*Schuyler Citizen.*

MILCH COWS AND WORKING CATTLE.—A good demand now exists for good milch cows with calves. All good animals of this discription are bought eagerly, and at fair prices. Sales were made yesterday at from \$25 to \$35, and in some instances as high as \$48, was paid for extra good cows.

Working cattle are also in much request, and sell at much higher prices than beef cattle.—*Chicago Democrat.*

The abundance of fodder and the tendency to an increase of dairy product in the north part of the State may account for the above demand.

SPECIAL NOTICE.—For terms see prospectus on last page. All exchanges and communications for the eye of the editor should be directed to ILLINOIS FARMER, Champaign, Ill. Electrotypes and business matters, and subscriptions, to the publishers, Springfield, Ill. Implements and models for examination should be sent to the editor. The editor will, so far as it can be done personally test and examine all new machines and improvements submitted to his inspection. He will be found at home, on his farm, nearly all of the time. So far as it is possible the conductors on the I. C. R. R. will let off passengers at his place, which is directly on the road, three and a half miles south of the Urbana station, now the city of Champaign.

tf

When you sign your name as endorser of an unthrifty neighbor's note, it is a bad sign.

Battles painted by artists are invariably drawn battles.

If you and you sweetheart vote upon the marriage question, you for it and she against it, don't flatter yourself as to its being a tie.

Secret kindnesses done to mankind are as beautiful as secret injuries are detestable. To be invisibly good is as god-like as the invisibly evil is diabolical.

"Why don't that lazy fellow go to work, I wonder?" said a gentleman to a companion.

The "lazy fellow" alluded to was an Italian, staggering before them under the weight of an immense hand organ.

"Go to work!" exclaimed the party addressed; "well, I should think that what he does might be reasonably termed the hardest kind of work."

"No, sir," responded the first speaker, "it is decidedly all play."

APPLE TREES

A T

THE MENDOTA NURSERY.

A GREAT CHANCE FOR TREE DEALERS.

I will sell trees at the following reduced rates during the spring and autumn of 1861. Descriptive catalogues had free, on application.

PRICES OF APPLE TREES:

5 to 6 years old, 7 to 9 feet high, stocky and fine, per 1000...	\$75
4 to 5 " " 5 to 7 " " " " " "	65
2 to 3 " " 3 to 5 " " " " " "	50
2 " " 2 to 3 " " " " " "	30
seedling, 7 to 10 " " " " " "	85
" " 5 to 7 " " " " " "	8
Silver leaf maple, 5 to 7 " " " " " "	per 100....
strawberry neck pine, per 1000.....	3

JAMES L. LOOP.

By C. D. STEVENS, Agent.
ap-Imo

MENDOTA, Ill, March 15, 1861.

DU PAGE COUNTY NURSERIES,

LEWIS ELLSWORTH & CO PROPRIETORS,
NAPIERVILLE, - - ILLINOIS.

THE PROPRIETORS OFFER FOR SALE FOR THE Spring of 1861. one of the largest and finest stocks and assortments of Fruit and Ornamental Trees, Shrubs and Plants ever before offered at the West.

100,000 apple trees from 1 to 5 years old, from \$20 to \$80 per 1,000.

Pear, Cherry and Peach Trees. Native Grapes—an extensive Stock of Catawba, Isabella and Clinton, from \$3 to \$10 per hundred, or \$15 to \$50 per thousand; other leading, hard, choice grapes by the dozen or hundred.

Foreign Grapes in variety, for culture under glass, \$4 50 to \$3 50 per dozen, \$25 to \$36 per hundred.

100,000 Currants, mostly Large Red Dutch, from 1 to 2 years old; prices from \$8 to \$12 per hundred, and \$15 to \$50 per thousand; other standard sorts at higher prices.

Gooseberries of the best American and English varieties; Raspberries, Blackberries, Strawberries, cheap by the dozen, hundred or thousand.

Roses—Voss, perpetual, Bourbon, Tea, Noisette, Bengal, China, Climbing, and June, in large quantities.

A large assortment of Ornamental Shrubs and Plants, Silver leaved Maple, 1 and 2 years old, \$5 to \$10 per hundred.

Apple Root grafts by the thousand, or hundred thousand.

Our catalogue No. 1. Descriptive; No. 2, Dahlias, Plants, &c.; No. 3, Wholesale, the latter for nurserymen and wholesale dealers, sent to applicants

mar2t

L. WIS ELLSWORTH & CO.

ST. CLAIR NURSERIES,

SMITHFIELD, ILLINOIS.

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Apples,	Peaches,
Pears, St.,	Pears, Dwarf,
Cherries, St.,	Cherries, Dwarf
Plums,	Graes,
Currants,	Gooseberries,
Blackberries,	Raspberries,
Strawberries, &c., &c.	

Also a fine stock of Evergreens, Rose, Flowering Shrubs, Bulbous Flowering Roots, &c., &c.

We are prepared to fill orders in quantities on and after the 1st of April, for the Early Nansemond Sweet Potato, Tomatoes, Cabbages, and other varieties of early vegetables.

Prices to suit the times. Terms cash.

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BABCOCK & BRO.,

PAUL CHILSON'S CRANBERRY CULTURALIST—BELLINGHAM, MASS.

Offers for sale a choice and large stock of Cranberry plants for Spring planting, adapted to elevated and low lands. These plants are young healthy and in a full bearing state. Prices for my celebrated Bell and Washington varieties \$4.00 per thousand plants, Cherry variety \$2.50 per thousand, a liberal discount will be made on large quantities; for information on the culture. Send for circulars. Also, for sale Blackberry Raspberry and Whorleberry roots \$1. per doz.

All orders promptly attended to and carefully packed for transportation, the name and directions should be distinctly written and the money accompany the order, which may be safely sent by mail.

Address PAUL CHILSON, Bellingham, Norfolk Co., Mass. January 1, 1861-2t.

DR. S. BABCOCK, DENTIST, WEST SIDE OF THE SQUARE, over Chatterton's Jewelry Store. Having permanently located in Springfield, and fitted up good and comfortable rooms, and being supplied with the best material and every description of dental implements, including all the latest improvements, DR. BABCOCK feels under no embarrassment in offering his services to the citizens of Springfield and vicinity, feeling confident that, with nearly twenty years' experience and practice in some of the larger cities of the Union, he can give perfect satisfaction in every operation he may undertake to perform.

Dr. H. pledges himself to perform all operations in his line in as perfect and substantial a manner as they can be done in St. Louis, Chicago or any of the larger cities.

Charges moderate. Chloroform administered when desired.

Jan. 17, 1861.—tf.

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Apple,	Nectarines,	Blackberries,
Pear,	Apicots,	Strawberries,
Peach,	Quince,	Gooseberries,
Cherry,	Shade Trees	Cranberries,
Plum,	Currants,	Raspberries, etc.

Grape Cuttings and Outridges; also, a large stock of Green House Plants, Evergreens, Deciduous and Ornamental Trees and Shrubs. The following stock is on hand and for sale to the trade at extremely low prices:

150,000 one year old apple;
75,000 two " "
80,000 three " "
10,000 one " peaches;
2,000 Cook's seedling "
5,000 three year old plums;
10,000 two " "
10,000 one " "
20,000 one and two year old dwarf pears;
10,000 " " stand "
50,000 " two and three year old orange quinces;
15,000 silver poplar, (new kind);
12,000 Lombardy poplar;
12,000 weeping willow;
8,000 silver maple;
100,000 strawberries in varieties;
50,000 raspberries " "
50,000 currants " "
25,000 Lawton blackberry;
50,000 one and two year old asparagus;
10,000 rhubarb, in varieties;
150,000 Ohio Prolific, and Houghton Seedling gooseberry;
100,000 one and two year old grape roots;
300,000 grape cuttings;
100,000 apples grafted in fall of '60;
100,000 quince stalks;
500,000 American cultivated cranberries in varieties;
50,000 Osage Orange.

All the above Trees, Shrubs and Stocks are now growing, and ready for inspection in my Walnut Hills and White Oak Nurseries.

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Walnut Hill Nurseries, Cincinnati, Ohio.

P. S. Omnibusses pass the Nursery every hour, starting from Luer's Steam Bakery, No. 173 Sycamore street, four doors above Fifth, Cincinnati.

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NANSEMOND SWEET POTATOES, GROWN SOUTH FOR SEED, \$2 00 PER BUSH.—\$5.00 PER BBL.,

And larger quantities on still better terms for Cash.

Experienced Sweet Potatoe Culturists unite in the opinion that seed (Nansemond) should be obtained so far South as to insure proper maturity.

The following are reasons why I expect my large stock to be in demand:

1st. I have had many years' experience East and West in the potatoe business.

2nd. The facilities for keeping in my new mammoth Potatoe House surpasses any in the United States.

3d. The numerous railroads centering here, enable me to ship in any direction.

4th. The soil, climate, and length of seasons are greatly in my favor.

5th. My prices are reasonable.

Any quantity of Sweet Potatoe Plants, packed in moss, will be sold cheap in their season.

Address,
W. A. ALLEN,
Vincennes, Ind.

March 1st, 1861.

[2t]

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Address,
feb 26-2m*

L. POWELL,
Champaign Ill.

GREAT REDUCTION IN PRICE!

GROVER & BAKER'S

CELEBRATED NOISELESS

FAMILY SEWING MACHINES.

THE GROVER & BAKER MACHINE

Is simple in construction, easily learned, and with proper management, never gets out of order.

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Hems, Fells, Gathers and Stitches, and fastens its own Seams—thereby saving time and thread.

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PRICE FROM \$40 TO \$100.

HEMMER, \$1 00.

SALES ROOMS,

NO. 124 NORTH FOURTH STREET,

Verandah Row, St. Louis.

WANTED—A RELIABLE AGENT IN EVERY County in the State. dec1

CHESTER WHITE PIGS.

The subscriber continues to

**BREED AND SHIP TO ORDER
PURE BRED CHESTER WHITE PIGS,
OF THE BEST QUALITY.**

Hartford, Trumbull county, O. S. A. BUSHNELL.
dec 7

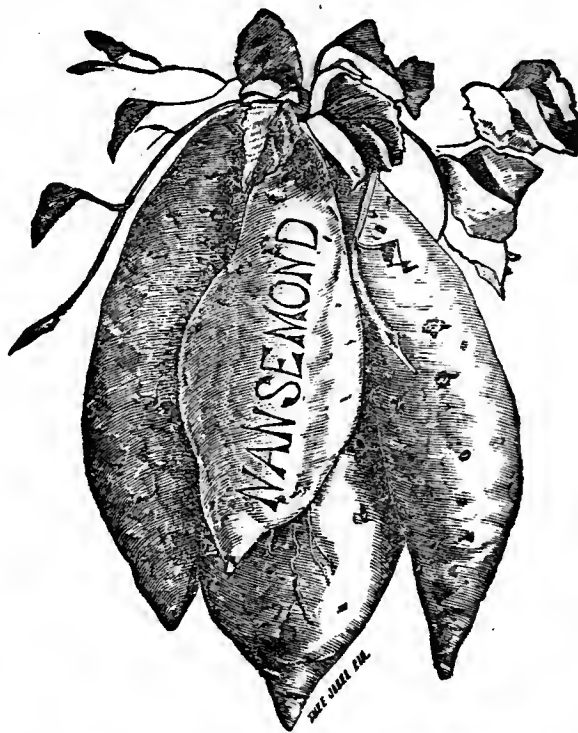
**BLOOMINGTON NURSERY,
BLOOMINGTON, ILLINOIS.**

Eighty Acres Fruit and Ornamental Trees.

200 NAMED SORTS TULIPS, ALSO HYACINTHS
Crocus, and a general assortment of Bulbs
and Flower Roots for Fall and Spring planting.
Nursery stock, Evergreens, Greenhouse and garden
plants—all at wholesale and retail at lowest cash
rates.

For particulars see Catalogues or address subscriber.
F. K. PHOENIX.

Bloomington, Ill., Aug. 1, 1859.



THE YELLOW NANSEVOND

IS THE ONLY VARIETY OF SWEET POTATO* THAT has given entire satisfaction in the northwest: Our stock of the above in store for next spring is unusually large, and of the best quality—propagated from the

BEST LARGE POTATOES

Selected from many hundred bushels; and the completion of our railroad to Rockville will enable us to fill and forward promptly all *Cash Orders* with which we may be favored, at the very low price of \$5 PER BARREL for eastern funds or exchange.

RESPONSIBLE AGENTS WANTED in every county, town, and village, to sprout small lots on halves. Farmers can club together and buy or sprout our potatoes in shares, and thus secure good plants for themselves free of cost.

THE SWEET POTATO CULTURIST, giving full directions for Sprouting, Planting, Cultivating, and Keeping, will be furnished gratis to Agents and Customers; and to others by mail, *post paid*, for twenty-five cents in stamps. Address,

J. W. TENBROOK,

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Rockville, Ind.

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Corner Fourth and Poplar streets, St. Louis, Missouri.

Open day and evening, for the reception of students and visitors during the whole year.

For catalogues or information of any kind, call at the College, or address

LOUIS ROHRER

St. Louis, Mo.

nov1-6m

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SOLD WHOLESALE AND RETAIL

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Send for catalogues of prices.

Chicago, Oct. 1, 1860-1y*

JOB M. LABHART.

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Any quantity of Sweet Potatoe Plants, packed in moss, will be sold cheap in their season. Address,

W. A. ALLEN,
March 1st, 1861. [2t] Vincennes, Ind.

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Hartford, Trumbull county, O. S. A. BUSHNELL.
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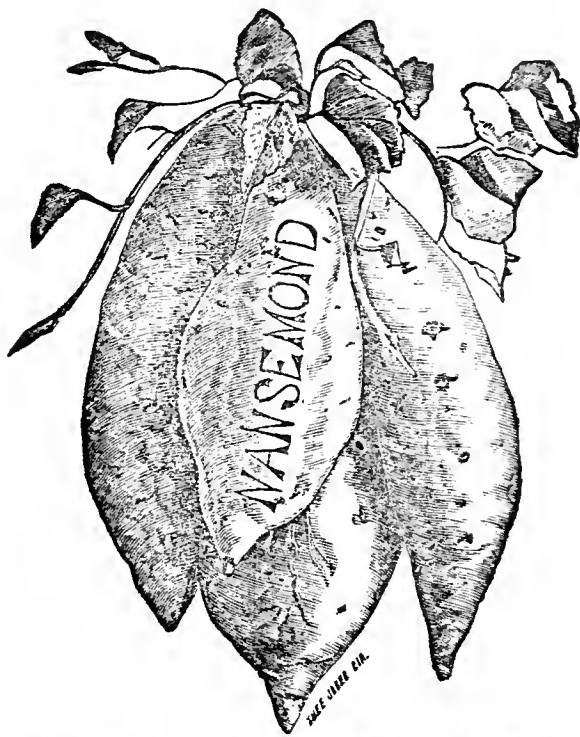
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BLOOMINGTON, ILLINOIS.**

Eighty Acres Fruit and Ornamental Trees.

200 NAMED SORTS TULIPS, ALSO HYACINTHS
Crocus, and a general assortment of Bulbs
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RESPONSIBLE AGENTS WANTED in every county, town, and village, to sprout small lots on halves. Farmers can club together and buy or sprout our potatoes in shares, and thus secure good plants for themselves free of cost.

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St. Louis, Mo.

nov1-6m

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CHICAGO POTTERY,

Chicago Avenue, one block west of Milwaukee Avenue.

Send for catalogues of prices.

Chicago, Oct. 1, 1860-1y*

JOB M. LABHART.



CURE COUGH, COLD, HOARSENESS, Influenza, any Irritation or Soreness of the Throat, relieve the hacking Cough in Consumption, Bronchitis, Asthma and Catarrh Clear and give strength to the voice of

PUBLIC SPEAKERS AND SINGERS.

Few are aware of the importance of checking a Cough or "Common Cold" in its first stage; that which in the beginning would yield to a mild remedy, if neglected, soon attacks the lungs. "Brown's Bronchial Troches," containing demulcent ingredients allay Pulmonary and Bronchial Irritation.

BROWN'S TROCHES "That trouble in my Throat, (for which the 'Troches' are a specific) having made me a mere whisperer."

BROWN'S TROCHES N. P. WILLIS.
"I recommend their use to Public Speakers."
REV. E. H. CHAPIN.

BROWN'S TROCHES "Have proved extremely serviceable for Hoarseness."

BROWN'S TROCHES REV. HENRY WARD BEECHER.
"Almost instant relief in the distressing labor of breathing peculiar to Asthma."

BROWN'S TROCHES REV. A. C. EGGLESTON.
"Contain no opium or anything injurious."
DR. A. A. HAYES,
Chemist, Boston.

BROWN'S TROCHES "A simple and pleasant combination for Coughs, etc."

BROWN'S TROCHES DR. G. F. BIGELOW,
Boston.

BROWN'S TROCHES "Beneficial in Bronchitis."
DR. J. F. W. LANE,
Boston.

BROWN'S TROCHES "I have proved them excellent for Whooping Cough."

BROWN'S TROCHES REV. H. W. WARREN,
Boston.

BROWN'S TROCHES "Beneficial when compelled to speak, suffering from cold."

BROWN'S TROCHES REV. S. J. P. ANDERSON,
St. Louis.

BROWN'S TROCHES "Effectual in removing hoarseness and irritation of the throat, so common with speakers and singers."

BROWN'S TROCHES Prof. M. STACY JOHNSON,
La Grange, Ga.

BROWN'S TROCHES Teacher of Music, Southern Female College.

BROWN'S TROCHES "Great benefit when taken before and after preaching, as they prevent Hoarseness. From their past effect, I think they will be of permanent advantage to me."

BROWN'S TROCHES REV. E. ROWLEY, A. M.,
President of Athens College, Tenn.

Sold by all Druggists at TWENTY-FIVE CENTS A BOX.

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DUNLAP'S NURSERY,

Forty Acres in Trees and Plants.

EMBRACING THE USUAL NURSERY STOCK, ALL of which will be sold low for cash. Orders for spring planting should be sent in early. 5,000 two year old

SILVER MAPLES

for timber belts, can be had at \$5 per 100.

J. B. Whitney, of Chatham, Sangamon county, is the agent for Sangamon and neighboring counties. Catalogues had on application. Address M. L. DUNLAP,
febl West Urbana, Champaign county, Ill.

E. DARROW & BRO., PUBLISHERS, ROCHESTER, have published "Slavery Unmasked: or Three Years in Eleven Southern States," by Rev. Philo Towor; price \$1. The best anti-slavery book ever published. We will mail one anywhere on receipt of price. Agents wanted to sell this work.
dec 1

E. DARROW & BRO., PUBLISHERS, BOOKSELLERS and Stationers, Rochester, Monroe county, New York; publishers of the Fruit Preserve Manual, price 15c. Roger's Scientific Agriculture, 75c; etc., etc. Copies mailed on receipt of price.
dec 1

E. DARROW & BRO., ROCHESTER, NEW YORK, publish lithographic plates of Fruits, Flowers, etc. over 300 varieties. Executed in the highest style, by the best artists in the country.
dec 1



GIN AS A REMEDIAL AGENT.

THIS DELICIOUS TONIC STIMULANT,

Especially designed for the use of the Medical Profession and the family having superseded the so-called "Gins," "Aromatic," "Cordial," Medicated," "Schnapps," etc., is now endorsed by all of the prominent physicians, chemists and connoisseurs, as possessing all of those intrinsic medicinal qualities (tonic and purgative) which belong to an old and pure Gin. Put up in quart bottles, and sold by all druggists, grocers, etc.

A. M. BINNINGER & CO.,

Established in 1798.

Sole proprietors,

No. 19 Broad street, N. Y.

For sale by D. S. Barnes & Co., No. 13 Park Row, New York.

Our long experience and familiarity with the requirements of Druggists, and our superior business facilities, enable us to furnish them with choice Liquors for medicinal and family use.

nov13-m&a

WOODBURN NURSERY.

THE PROPRIETOR OF THIS ESTABLISHMENT OFFERS for sale over 100,000 Trees and Plants, more or less, of which one needs who has the smallest piece of ground for cultivation.

Our list of Apples contains the BEST

SUMMER, FALL AND WINTER VARIETIES,

both for market and family use. Also,

Pears, Plums, Cherry,

Apricot, Quince, Currant,

Gooseberry, Blackberry, Raspberry,

Strawberries, Grapes,

may here be found of the best varieties; besides

Evergreens,

Shade and

Ornamental Trees

and Shrubs,

Roses, Dahlias,

Phloxes,

Chrysanthemums, etc., etc.

We have a large stock of the

SILVER-LEAVED MAPLE,

which is very valuable, either for its fast growth or beautiful foliage. This nursery is gaining a high reputation for the accuracy and thorough manner in which everything is done, and the proprietor is determined to make it worthy the confidence and patronage of all persons. Our Trees, Plants and prices, we are sure, will compare favorably with those of any growth, in the State, and all interested are cordially invited to visit our grounds and see for themselves.

Apple trees, two years old, \$12½ per 100; three years old, \$15 per 100; Peaches, \$18 per 100. Description and priced catalogue sent on application. Letters of inquiry receive prompt attention. Packages delivered at the railroad free of drayage.

Woodburn, Macoupin county, Illinois.

febl-tf

THE GROVE NURSERY. —

"DR. KENNICOTT."

CATALOGUES SENT FREE,

On application.

PRICES MUCH REDUCED,

And everything sent off, so packed as to go safe, and sure to live. Address

JOHN A. KENNICOTT,

oct1860

West Northfield P. O., Cook county, Illinois.

-6 m*

PRINCE & CO.'S

Improved Patent Melodeon.

GEORGE A. PRINCE & CO., MANUFACTURERS,
BUFFALO. N. Y.

Wholesale Depot, 87 Fulton St., N. Y.,

AND

110 LAKE STREET, CHICAGO, ILL.

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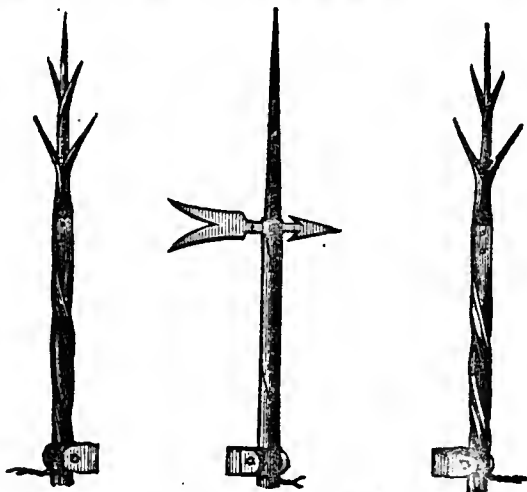
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THE ILLINOIS FARMER.

VOL. VI.

SPRINGFIELD, MAY 1861.

NO. 5.

May.

The seasons are wheeling their rapid course, and May, with her coronal of vernal flora is again here to make glad the hearts of all—what a promise of plenty it gives to the careful cultivator—what joy to the invalid who breathes the aroma of flowers, and looks out upon the green carpet that forms the rich setting of field and lawn. Is there any farmer so sordid, so lost to all love of the beautiful, that he does not enjoy the opening beauties of the floral kingdom, and rejoice in the deep green of the vernal verdure.

Summer, with all its wealth of leaves, full grown and waving in the noon day sun, is not more beautiful than when May is expanding them, to float out upon the morning air, full robed and gorgeous with the rich pencilings that nature with her wonderful art imprints upon the petals that harbingers the embryo fruit; does he see other than dollars and cents waving amid the opening leaves of the apple, the peach, the cherry, or the pear? do the spires of the tillering grain give him ought of pleasure than the contemplation of the heaping measure that their ripened spikelets may fill again and again? Is there nothing in the roseate hues of health, of bounding, joyous childhood, as tiny hands ravish the plants of the beautiful, wherewith to deck the parlor with the greetings of springs? It cannot be possible that such a man tills the teeming soil of the prairies; that he would willingly neglect the planting of flowers wherewith to make his home a perpetual spring. And yet, too often the modest request of wife

and children for flower seed and plants is in this busy season permitted to pass unheeded, and they must plod on amid the waving leaves and rustling grain, yet thousands of homes attest the unpleasant truth that, during this busy season when the fields are vocal with the glad song of the birds, and the air laden with the aroma of the flaunting flowers, that the time to plant for summer and autumn is passed in dreamy forgetfulness of our duty.

We would rouse up this class, and tell them, though too late for many, very many plants that are too much advanced, there are others that can be set, while, for seed, now is just the time. Shall we have the flowers? We leave it for your answer.

—Two young men undertook to see which possessed the greatest internal capacity, and to test the matter agreed to eat raw clams, each to eat until he could hold no more. The victor ate 160; the vanquished hero, gagging at the 149th, when he gave up the contest, remarking that he could eat more, but "*did not want to make a hog of himself!*"

The boy who undertook to suck an egg plant, and was choked by the yolk, has recovered.

If Noah revisited this earth, he would most probably take up his abode at Newark.

—Punch says, Yankees are "licensed whittlers."

—Punch says that if ladies will wear hoops, they necessarily make themselves butts.

Mrs. Partington says there isn't enough of the spirit of seventy-six left to fill up a fluid lamp.

The most direct method of determining horsepower—Stand behind and tickle his hind legs with a brier.

[Written for the Valley Farmer.]

Farmers Beautify your Homes.

I often hear it said among farmers, "We want fruit trees, we want something which will bring us some return which will pay." Now, I was brought up as a farmer's boy, and I still love that noble calling, and must own such expressions sound discordant in my ear. Farmers, you want fruit, and plenty of it; every farmer ought to have that steady old standby, the apple, the luscious peach, the melting pear, the delicious grape, besides cherries, quinces, and all the small fruits. They are a necessity, and you cannot do without them; you want them for your daily comfort. But is it not a libel on your noble vocation to express contempt for everything which does not pay, as you call it? Who but the farmer, and the farmer's wife and children, should have as lively a sense of the beautiful? Who but he, in the dewy morning, when nature is awakening, and a thousand brilliant dew drops sparkle from every spray; and every live thing, from the tiny bird to the lowing cattle, seems to lift up its voice in one chorus of thanksgiving, should "look from nature up to nature's God," and glory in the works of his almighty hand? Of all callings upon earth, the farmer should have the keenest sense of the beautiful in nature, and he must have it if he has a feeling heart in his bosom.

Then surround your homes with the beautiful forest trees, the elm, the maple, the birch, the sycamore, the linden, and the deciduous cyprus, which will give you and your children grateful shade, and draw the birds around your door to build their nests and sing their ever sweet songs. Plant evergreens, the noble Norway Spruce, the Balsam Fir, the Hemlock, Arbor Vitæ and Red Cedar, to make your surroundings more cheerful, when winter, with snow and frosts, is upon us. Plant shrubs and flowers to cherish and foster a sense of the bright and beautiful in your wife and children; teach the latter that these are nobler delights in their immediate surroundings, in their every day reach, than the costly and enervating pleasure of the city, and you will have them grown up around you, pure in thought healthy in soul and body, the delight of your old age. It will make them contented and happy, and teach them to think that "There is no place like home." And is this nothing? Does it not pay, and pay well?

Therefore, as one who heartily sympathises with all your true interests, I would say, plant

shade trees, evergreens and flowers, instead of looking on them with contempt, as things which will not pay.
GEORGE HUSMANN.

Evergreens.

ED. FARMER.—But few of our farmers appreciate the cheerful aspect that a few evergreens give to the door yard, and especially during the season when the deciduous trees are bare of foliage. The large percentage of loss in the transplanting of evergreens has had a discouraging effect on this most ornamental of our trees. Here the Red Cedar grows most luxuriously about the base of our sand stone hills, yet few of our farmers think of transplanting them, and when they make the attempt, often fail.

These trees, if of large size, should be moved on a damp day, but the better way is to put small ones in the nursery and after having been two or three times transplanted, they can be shipped any distance with safety, provided that the roots are not exposed to the sun or drying wind. With deciduous trees, if the roots become dry, they again swell out on exposure to moisture, and throw out new roots. Not so with evergreens, whose roots are resinous, and when once dry, they never recover, and the tree dies. Cut off none of the longer branches but shorten in the ends, so as to give the tree a symmetrical appearance. Red Cedar is very much benefitted by shearing. Allow no grass or weeds to grow within four feet of them; mulch them with half rotted straw and manure to the depth of four inches, and to a distance of four feet on each side of the tree. If brought direct from the forest, they should be partially shaded the first summer. Should the weather prove dry, water them by wetting both foliage and roots. Get your trees at the nearest reliable nursery, so as to take them in a wagon, for the packing of large evergreens is objectionable, on account of too closely compressing the branches. All of this requires both time and care, but they will repay you in their beautiful green, when like gems in the russet landscape they greet the eye when the earth is locked in frost, and all else wears the cheerless mantle of winter.

I would urge you as you love your family, that you surround your home with these silent, yet pleasant companions to your idle hours, and when your foot steps should linger, admiring their graceful symmetry, and deep green foliage,

so pleasing to the eye at all times, and especially at that season when other trees and shrubs stand leafless in the chilly air.

EGYPT.

Cobden, March 13, 1861.

—"Egypt" knows what he is driving at when he speaks of evergreens, and our readers will do well to take heed, to his advice. He has sent us five thousand young Red Cedars, which grew as he describes, at the base of the hills, where the sand stone crops out, or rather where it has not weathered down to soil. These were puddled as we have directed for the shipping of strawberry plants, in a previous number.

These young evergreens we put out under the shade of a row of peach trees, and protected from the north and west wind, where they are to remain two years, when they will go into nursery rows in the open ground, thus preparing them to stand our sharp and changing winters. Nothing gives a more cheerful aspect to the exterior of a farm home than a few well grown and thrifty evergreens, at all times of the year, while in winter they are almost indispensable. Ed.

Something About Wines.

With all our talk about the growing of the grape for manufacture of wine, and from all the grape juice expressed, how little of it can truly be designated as wine. It may be so called, but the true wine taste would as soon decide the logwood, sugar, and neutral spirits, sold as Port wine, to be the real production of the grape, as call much of the preparation of grape juice, currant juice, and their sugar mixtures by the name of wine.

In my early years it was my lot to be daily associated with those who made wines more or less a study, and who from experience could detect blinfolded, by taste alone, every particular shade of wine, its age, etc., etc. During the past few years, I have been often placed among wine tasters, and have occasionally had samples of wine sent me for comparison, etc. But from observation and association, I have learned to know that in wines I know nothing, and just enough to regard most of the so-called wine as utterly undeserving the name. Much of it is made from unripened fruit, or in process of fermentation, is so managed that without addition of sugar, it would pass, as I once heard a member of a wine committee decide, for pretty fair vinegar.

Again, there is much, and in fact the larger quantity, among those who make for their own use only, to which so much sugar is added that the mixture becomes rather a cordial than a wine. We will not talk of the bouquet at all that, but simply say that in wine, there must always remain that fruity taste, which, after drinking a glass, will leave on the palate a taste similar to

what would be had if we had just eaten of the fruit from which such wine was made. Without this, our grocers who sell all sorts of mixtures for wines, have as much right to the name for their preparations as the manufacturers of a pleasant drink from grape or cane juice and sugar. At least, such is the writer's opinion, and he makes these criticisms, not to reflect on the inexperience of any one, but with a view to have those who are growing fruit, and about to make it into wine, give the matter their careful study, so that we may hereafter have more of true wine and less of cordial; that, after drinking a glass or two, will leave on the palate a taste of the sugar cane rather than the grape.

THE LOGAN GRAPE FOR WINE.

Last fall, or rather last summer, when eating of the Logan grape, I counted it as promising to become more valuable as a wine grape than for the purposes of the table. Afterward I saw the must when preparing for wine, and it was so light by the saccharometer that the promise, as counted by me, was very much restricted. A few days since, however, I called on Mr. Hoyt, the owner of the fruiting vine here, in whose possession was the must above named, and after comparing the wine from the Logan, with similar expressions from the Delaware, Catawba, and Isabella. I find my original impressions from the Logan for wine purposes more than sustained. The wine is dark in color, but as made by Mr. Hoyt, retains its fruity taste, with a little of the astringency natural to a pure Port. I like it better than the wine from Norton's Virginia, which our Hermann friends consider the best grape yet tested for wine making. Of our own wine, I drank a few days since, some made by a gentleman here at Cleveland, that left the taste in the mouth as of having just eaten of the fresh ripe fruit. How he made it, I don't know, but the fruity taste was there, and the liquor as clear as crystal.—*Field Notes.* F. R. ELLIOTT.

Cleveland March, 1861.

[From Field Notes.]

Planting and Training Grape Vines.

[Many persons who have planted young Delawares, Rebeccas and other choice grapes, have had their patience sorely tried by finding the upward progress of the vines much slower than their expectations; and much blame has been cast upon the nurserymen for selling, as is alleged, feeble plants, when in reality the fault is mainly attributable to the want of skill and care on the part of the planter.

The following article abridged from the *Valley Farmer*, is the most sensible that we have seen on this point.—Ed.]

We are induced to take up this subject from some facts that have been forced upon our observation within a year or two—facts which illustrate the general want of knowledge on this subject throughout the country. In the fall of 1859, we made up quite an order for various kinds of grapes for a number of our friends, including some for our own planting. Each individual

planted his own according to his idea of the requisite mode. At the close of the season we saw most of these vines, and out of the whole number we do not remember to have noticed one that had made a greater growth in one continuous length than two feet, but most of them had been permitted to throw out numerous branches hardly exceeding one-eighth of an inch in diameter or one foot in length, while those of our own planting attained fully ten feet in height, some of which would have borne several bunches of grapes had we permitted it. We allude to these facts by way of illustrating the difference between good and bad management.

PREPARING THE GROUND.

Even for a single vine, a bed or border should be provided, of rich, well prepared soil. But where a number of vines are to be planted with the view to train them to a trellis, a well drained border of not less than ten feet wide and eighteen inches deep should be prepared. In preparing the border, the ground should be regularly trenched, and as we have said, not less than eighteen inches deep. This is done by opening a trench, say two feet wide, to the depth designed, and this is filled with the soil taken from the next trench, usually putting the surface soil at the bottom. If the sub-soil is poor, it should be thrown out and carted away, and its place filled with good, rich soil, composed of decayed turf, well rotted stable manure, bones, etc., so that the entire depth trenches shall be filled with soil sufficiently rich to grow any garden crop. We have observed that many persons who have undertaken trenching for vines, etc., have merely inverted the earth and soil, placing the surface soil at the bottom of the trench, and the subsoil upon top, and planted their vines in this way. Unless the surface soil is also made rich, and even to the bottom of the trench, it will be labor lost.

PLANTING THE VINES.

The best vines are usually propagated from layers. These, if well grown, are best when but of one season's growth. Vines propagated from single eyes or from cuttings do not make so strong a growth, yet these are mostly planted at one year old.

In planting, (we assume that the border has been well prepared, and the compost fine and thoroughly mixed), a hole is to be dug sufficiently wide to receive the roots, well spread out in their natural position, and ten or twelve inches deep. In the centre of this hole raise a mound, or cone, up to within three or six inches of the surface. Place the plant upon the top of this cone, so that the upper roots shall be from two to three inches below the surface, then divide and spread out the longest lower roots over the top of the mound, and slightly cover with soil; and then divide another tier of roots, and cover in the same way, so that no two roots shall come in contact with each other; then fill to the surface, and gently tread the earth down, beginning at the outside of the hole and finishing toward the vine.

TREATMENT THE FIRST SEASON.

Even if vines have been planted, here, almost universally, begins the first great error, in the total neglect of training. Instead of cutting back the vine to three eyes, all that chance to be on the plant are permitted to grow, producing by fall a mass of small weak, unripe shoots, instead of one good, strong, well matured shoot, as would have been the case had all of the power of the vine been concentrated into a single channel.

The vine should be cut down to three eyes or buds, although but one shoot should be permitted to grow the first season, yet it would not be safe to cut the eye down to a single eye, lest by accident that one should be destroyed. But if all three start and grow, when they are three inches long the weakest one may be rubbed off, and, after a few days, if no accident occurs to the others, the next weakest one may be removed. The second or middle bud generally is the strongest, and the one most desirable to preserve to form the vine. The subsequent care through the season consists in keeping the ground clean and mellow about the vines, in tying the vine to a suitable stake, say every eight or twelve inches, and in pinching off the lateral shoots, that is, the branches that spring out at the foot of every leaf on the main stem. As soon as these have formed three leaves, two of them shall be removed. After a few weeks they will push again; these should also be pinched off in the same way, removing two leaves and leaving one. By leaving a single leaf no injury is done to the vine, or the buds immediately at the base of these young shoots.

In a good season, under this mode of treatment, the vine may be made to reach the height of ten to twelve feet, of strong, well matured wood.

If from any cause, the vine does not make a strong growth of at least eight or ten feet the first season, it must be cut back in the fall to three eyes, as in the case of the layer at the time of planting, and the subsequent treatment must be the same as that of the first season; and this course must be repeated until the vine does gain the proper size and strength, if it requires a second and a third year, at the end of which period the vine will be considered as one of only a single season's growth. At the beginning of fall it is well to check the growth of the vine by pinching off the end of the main shoot, in order to promote the ripening of the wood. If the weather be warm and wet, in the course of two weeks it will be well to repeat this operation by checking the new shoot that will put forth.

SECOND YEAR.

The single strong shoot made the first year should be cut down during the fall or winter to four buds, only two of which should be allowed, finally, to grow, the others being rubbed off. These two shoots should be tied to stakes and the laterals pinched out, as directed during the first season. If the vine starts strong and vigorously, one, and not to exceed two, bunches of grapes may be permitted to grow; all the other

fruit buds should be removed. The autumnal shortening of the main stems should be attended to as in the previous season.

SECOND YEAR.

The two shoots made during the second year are ready to be extended in a horizontal manner and secured to the newly erected trellis. These branches are now termed arms and are to be cut back at the same time, so as to leave two good buds or eyes on each arm, so that the upright shoots shall be eight or ten inches apart, any intermediate buds must be rubbed off. The four shoots that are permitted to spring from the arms must be trained to the trellis or wall. The summer and fall treatment must be the same as in the previous season.

FOURTH YEAR.

The two middle shoots or canes are suffered to remain in their position on the trellis, only they should be shortened to three or four inches in height at the time of the winter pruning. At this time, also, the two outside shoots should be secured in the line, extending the arms, leaving two good eyes on each at the distance of eight or ten inches apart, shortening the arms just beyond the last bud designed to grow. This will add two additional uprights, and two to be laid down, extending the arms as before. The two uprights remaining upon the trellis this season, may be permitted to mature each, two or three bunches of fruit, all other bunches should be removed at the time of blossoming. We will remark here that the future health and productiveness of the vine depend much upon care in not allowing the vine to over-bear. Most persons are reluctant to remove the germ of a single fruit; but if the number is not reduced within the capacity of the vine to mature, and at the same time admit of a vigorous growth of wood, serious loss will be sustained; besides the fruit of an overtaxed vine is of but little value. This precaution must never be forgotten at any stage of the growth of the vine.

SUMMER PRUNING.

The summer pruning consists in removing all surplus branches, and pinching off the little side shoots as we have before indicated, leaving a single leaf at each pinching, and in shortening the laterals upon which the fruit is borne. These should be cut back, leaving four or five leaves outside of the last bunch of grapes. The German vine dressers of the West, many of them, leave but one or two, a number entirely inadequate to the maturity of the fruit. This shortening of the fruit bearing branches is performed when the grapes are about the size of small peas.

—A cotemporary states that "Mr. Taft was run over and killed on the Cleveland road, the other day," and adds that a "*similar misfortune*" occurred to him about two years ago!" A few more such 'similar misfortunes' will be the death of him!

The Soil at Cottage Hill and the culture of the May Cherry.

MEETING OF THE GARDENER'S SOCIETY.

At the regular meeting of the Gardener's Society, at their rooms last evening, discussion upon the adoption of the new constitution was deferred to listen to the report of James W. Wakeman, on the subject of Cherry planting, which we print below.—*Chicago Tribune.*

MR. PRESIDENT:—The subject of the cherry is introduced. The question is asked me if our location is not very favorable for that fruit. Some correspondents have eulogized our location and soil about Cottage Hill as being adapted to fruit growing, we think beyond its merits. Our advantages and disadvantages are quite in common with others around us. Our location is fifteen miles nearly west, eighty-two feet above the level of the lake. We are five miles west from the Desplaines, and fifty-two feet above that stream—only our exposure is eastern. Our elevation, as can be seen, is not great. We are remote from timber, except our little shrubbery. Common prairie soil, mostly peaty, spongy, underlaid with a strata of yellowish clay, which connects with blue clay, which extends down about thirty feet, when we come to plenty of water. Our soil is of that class which suffers greatly for drainage. Yet we are confident nearly all our losses and disappointments in fruit growing can and will be avoided by making a proper selection of varieties, properly setting them out, and having a knowledge of some correct system of attending to their after requirements. Nearly all varieties of the Morello class are perfectly at home with us. They require plenty of manure and little of the knife. With us the Dukes mostly are hardy in tree but shy bearers. The Hearts and Bigarreaus are somewhat tender, but we cannot give them up yet. They have with us borne five successive crops. We keep them quite low by cutting back in the spring in order to get reliable fruit spurs and young bearing wood; also a large round full head, compact as possible with most varieties. On the other hand if the top be allowed to run up, the sap shuns the fruit spurs below, and most of them perish; the branches naked, growth mostly in the top. Some years the fruit rots badly—the tops of the highest rot first. Of three branches on different trees which were rung or choked, the fruit all rotted, while the balance of the fruit was sound. We believe the rot is caused by inward pressure of sap aided by external wet.

We surface drain all our fruit ground by plowing in ridges—it being too stony to mole drain, and our pockets being too light to underdrain. Two things are necessary for these trees: first, a deep soil for the extension of their roots beyond too hard frosts and the effect of severe drouth, which puts them in a state of rest through the summer, when they begin to grow in the fall and get winter killed. Secondly, they must have a chance to keep out of standing water; then if they are kept down low all will be right. Each

variety has its own peculiar habits of growth, which with its condition of health and the desired requirements should ever guide the knife.

We are sorry to see the Early Richmond and Early May being confounded together. "Rural," over a year ago, writing of our cherries, says Mr. Wakeman must be mistaken in regard to Early Richmond; it probably is Early May. Some others also recommend the May, while Cole, Thomas, Barry, Elliott and others describe the Early Richmond with unmistakable accuracy and recommend it, while they hold the Early May in low repute. Elliott in his work, says of the former, it is indispensable to every garden, the latter indispensable only to his unworthy list. Barry in his Fruit Book and Catalogues of Fruit, always recommends the former, but the latter he mentions not, it is too unworthy. Now, if our Early Richmond is Early May, where is that larger and more productive cherry, the above authors all so earnestly recommend? Again, why did they all put the May down as a small and inferior cherry? Is it possible they too are mistaken? The Early Richmond has already ten synonyms besides the latter. We object to calling it Early May. We were the first who introduced it at Cottage Hill, and if the Cherry King does not object, we propose christening it *Moses*. I hope to hear from others on this point of nomenclature. It reflects confusion on nurseries. Outsiders will justly say, if fruit growers do not know their own fruits, who does? or it is time they did. What two varieties of cherries did we present to the *Prairie Farmer* office, and to the Gardeners' Society at their exhibition over a year ago, for an expression from them on this point? Twelve years experience with them and with our numerous visitors, and handling and selling many hundred bushels of them, satisfies us they were these varieties.

TRANSPLANTING.

We prefer, if possible, to dig but one hole for each row, and that we do with a plow, trenching the ground so as to lead off water. Experience of years satisfied us (although many are against us) that fruit trees in our light mucky soil, which imbibes and radiates its heat so easily, are not very sensitive in regard to a little extra depth so long as their abode admits of no standing water. Five years ago we placed over the roots of a yellow Spanish cherry tree, also an Early Richmond and two Lombard plum trees, three feet of solid clay from the cellar bottom. These trees are underdrained, and are as healthy and productive as any we have. The drouth or winter makes but little impression on them. They bloom some later. We do not recommend setting trees this deep. This was an experiment to try their disposition to suffer in such a capacity. We never stake our trees. We choose stocky trees or cut the top until they can hold themselves up. We shorten or cut in, in the spring on all young trees and on some old ones if of thrifty growth. We believe all orchards better for being cultivated, but not so deep as to injure the roots, which is too often the case if not surface drained.

Oats, wheat, or a crop of grass are almost equal to a fire. We believe all orchards should

be cultivated, so long as quality or quantity of fruit are desired. Care should be taken that no tree leans to the northeast, for they become sun struck or injured. In setting out we always lean our trees to the southwest, as our prevailing winds come from that source. Farmers are too much in the habit of plowing the earth from the row, and leaving the roots nearly or quite bare. The earth should always be highest on the row, so that the ground may be moved and stirred on top without injury to the roots, which if broken will sprout and prove troublesome.

There is much land good for all summer crops, but very unsuitable for orchards on account of wet, except drained. We have underdrained some of ours, and find it imperfect in the fall and spring, when it is needed, on account of frost in the ground shutting out water from the drains, and flowing around the trees, freezing in such a manner as to injure and spoil many; some thrown entirely out of the ground, others with the bark loosened part or all around the neck of the tree. Surface draining in this respect is preferable. It also gives the trees an extra depth of soil, which does them as much good as to hill corn or potatoes, thereby affording them a deeper and better extension of roots, enabling them to better withstand the drouth, wind, and extreme frost. A tree thus established in deep soil, will seldom have that disagreeable suckering habit. Its crop is also much improved. Its growth is steady, while trees near the surface are unsteady, by being affected by frost and drouth. In moving some trees of several years standing on wet land, they had very little depth of root. They were evidently between two evils—drowning or freezing to death—they chose the latter. The orchard of M. Covell, of Cook county, is on good corn soil, rich sand, beautifully protected on all sides by timber, naturally underdrained twelve feet, and not one root graft in it, half top grafts and half natural; bears well, and noble fruit, but the loss of trees during those hard winters of 1856-7, on two acres, was far more than our seventy, cut on the naked prairie, except a little protection on one side. The cause of dead and part dead trees was the thinness of the soil; the roots could endure common winters, but not those. Surface ridging with a plow, probably would have saved every one of them. We would ridge or surface drain all thin soils if ever so dry, and all wettish soils, even if underdrained, for orcharding to guard against ice around the tree.

Remarks.—By the elevation as given by Mr. W., it will be seen that the location at Cottage Hill, as to the surrounding country, has advantages which should not be overlooked in fruit growing.

Dr. Warder says one of the essentials to success is that the orchard stand upon an elevation above the surrounding plain. This is precisely the case at Cottage Hill. A short distance east of Mr. W. commences the river flats that stretch away three miles to the Des Plaines river, and beyond him, to the west, the Salt Creek cuts deep into the open prairie, and whose banks are relieved at intervals with groves. Thus we have at this point a miniature water shed dividing these two streams and giving to the location certain advantages of elevation. But this is not all, for there is also a geological difference made by the out-

cropping of the "Niagara limestone," which is presented at various points in the neighborhood, and provides workable quarries both of magnesian and quicklime. It requires no stretch of the imagination to conceive that in this neighborhood there might be also outcrops of this limestone now weathered down to soil, and which, of course, in its structure would essentially differ from the diluvial drift of the common prairie soil, and just such a spot is this upon which stands the buildings and bearing orchard of Mr. W., and just such another, but to a smaller extent, is that upon which the orchard and house of the former residence of Mr. C. W. Martin, in the same township. At these points the soil has a natural drainage; the wells are deep, but when water is reached it is of an excellent quality and abundant. We could point out similar places scattered over the neighborhood of this outcrop of limestone formation. Mr. W.'s orchard is large, somewhere in the neighborhood of eighty acres; the trees are thrifty, but we would venture the prediction that the northeast part of the orchard, standing, as it does, on common prairie soil, will never be very remarkably productive, at least no more so than other points to the north of it. We wish to be understood in this matter, as we do not wish any person to draw the conclusion that all of this Cottage Hill neighborhood is so peculiarly adapted to fruit growing, for even with its elevation, a portion of it is no better than the rolling prairie to the west of the creek; but we wish to call attention to the fact that there are in the neighborhood outcrops of natural soil made from the disintegration of the limestone formation and not covered with diluvial prairie drift, and that on those outcrops, the drainage being perfect, so much so that the cellars are dry without the usual drains, and the soil being strongly limestone formation, fruit trees thrive well, and all orchards thus situated produce remarkable good crops. Aside from this, the bearing trees of Mr. W. are upon a northeastern slope and protected on the southwest by an artificial grove, which gives them the advantage that we have contended for—in artificial belts on the south and west. You would hardly call that a peaty, spongy soil, when a cellar six feet deep is always dry without a drain, where the well is twenty feet deep, and in which the water never rises within ten or fifteen feet of the surface. Plant fruit trees on such a soil and protect them on the south and west, and we will ask no one to say that these are not advantages. It is true, that at the base of this slope the land is spongy, where the drainage of the formation above is discharged through the drift clay of the common prairie but on this soil are no bearing trees, and without thorough underdraining there probably will not be. Another advantage in this location, is the fact that for two or three years before the planting of the orchard, from one to two thousand sheep were herded upon this orchard ground. We contend that this small tract of land has advantages that do not often occur, and to say that because any particular variety of fruit will flourish upon it, that it follows as a matter of course that it will succeed anywhere is a great mistake. These very grounds of Mr. W. is one of the strong

points illustrative of the theory of protection set forth in our address at Bloomington, that the south and west sides of the orchard most needed protection, and that the east the least of all. To ward off the sharp southwest wind we have found to be the most beneficial. In our orchard at Leyden, three miles distant, the same phenomena has been abundantly verified.

A word or two as to the

MAY CHERRY,

Which is not the one described by Downing as a Morello, but is a Kentish, a sub variety of the Early Richmond, very similar in quality and the habit of its cousin, or may be parent. It is very productive in all parts of the State, and adapted to a great variety of soils; but without protection and thorough underdraining we cannot expect that it will make the enormous annual returns that Mr. W. claims for it under all circumstances, taking his own trees for a guide; in fact, some of his own trees, standing on common prairie soil, have not come up to his standard, while those near the house have astonished visitors with their loads of fruit. We are not particular about the name. At Cincinnati it is well known as "May," or "Early May." No one there calls it the Early Richmond, and it is fast becoming the great market cherry. We are satisfied to call it simply May, to distinguish it from the Morello cherry of the same name, or our fruit growers may call it by any other name. Call it what you will, it is destined to find a place in every orchard in the Northwest, and to a great extent will take the place of all others. It will be to the cherry family, what the Keswick's Codlin is among apples, or the Black Cap among raspberries.

To Mr. W. is due no small meed of praise for his exertion in behalf of fruit culture, and for the introduction of the May cherry. But for him, it might continue to be confined to the grounds of Mr. Bronson, near Lockport, who brought it with him from near Cincinnati, but now it is rapidly extending over the north part of the State. At the same time we will remark, that it would at no distant day have reached the same point

from Cincinnati, where it is largely worked, and in the nursery of Mr. J. S. Cook, to the extent of twenty thousand in a single season. We obtained our stock of Mr. W., and have disseminated thousands of trees to all parts of the State. At the Dupage county Nursery of Lewis Ellsworth & Co., they work it largely as a dwarf on the Mahaleb. Our practice has been that of Mr. W., to work its standard high on the Morello, and by deep setting avoid the sprouting about the roots that he mentions, but in all such cases the ground must be well surface drained, to say the least. ED.

[From the N. Y. Tribune.]

Marvels of the Wheat Plant.

Iron has been held by some to be the true symbol of civilization, because nations produce and use it in proportion to their social and industrial advancement. A similar claim has been made for cotton, but by the task master only. But the wheat plant is the true symbol. Civilization began when its cultivation commenced. No savage nations cultivate it. The American aborigines had no knowledge of it, and they quickly remarked the difference between themselves and the English, saying that the latter lived on seeds while they lived on flesh; that the flesh had four legs on which to escape, while they had but two with which to pursue it, and that the seed-growers would supercede the flesh eaters. Wherever wheat is cultivated the nations abandon barbarism. Mechanism was invoked, even many centuries ago, to promote, by rude contrivances, both tillage and cleaning. The inventor of the sickle is unknown, but the pioneers of Dutch commerce in China there discovered the winnowing mill, which is now a fixture in every American barn. The wheat plant has long been perhaps the greatest power in the earth. It was the acknowledged staff of life when the steam engine was unknown, before a single coal mine had been opened, or the miraculous capacities of iron had been ascertained. It has been the great power from which human efforts, in all countries, has derived its mightiest momentum. It has built turnpikes and railroads, dug canals, founded cities, covered rivers with steamboats and the ocean with ships. Millions of human beings depend upon it for existence, both as growers and consumers. Banish it from the earth, and it would be vain to seek for a substitute. Our teeming West would stop suddenly short in its wonderful career of greatness. Agriculture everywhere would pause, scarcity be universal, and the fact be recognized that the wheat plant is the corner stone of civilization.

The oldest history mentions the cultivation of wheat. But the plant has at no time, nor in any place, been found growing wild. Neither is the country of its origin certainly known. On this

point we obtain light enough from history and botany to justify the conjecture that its native place is Persia, and also India. But even on this point there are different opinions entertained by able writers. It is certainly not indigenous to America. In 1530, a slave of Cortez found some grains which had been accidentally mixed with rice, and having carefully planted them and their product for several years, he raised a stock of seed from which all the subsequent wheat crops of Mexico have been derived. The controversy touching the origin of wheat has been most animated and voluminous. In Sicily a wild grass is found called by botanists *Egilops ovata*, which some have contended to be the true parent of wheat. It is a hard, rough looking grass, which is sometimes gathered in bunches and burnt, and the seeds used for food.

It is also found in various other places, and there are several species of it. It was contended that by careful cultivation the *Eg-lops* could be transformed into wheat. This was as vehemently denied. It was known, however, that, under certain circumstances, plants very nearly resembling wheat had been produced from two perfectly distinct species of *Egilops*, and the presumption obtained that these were the wild representatives of cultivated grain, and that therefore wheat is nothing more than *Egilops* modified by the influence of soil, climate and superior cultivation.

While this point was yet mooted by the botanists, an experiment was going on, unknown to them, instituted by one who had never heard of their investigations, their discoveries or their disagreements, and who knew but little of botanical science. Its results have had an important influence in determining the question at issue. In 1838 a French gardener, Esprit Fabre, found the *Egilops ovata* growing wild in the neighborhood of his residence at Adge. In the autumn of that year he sowed the seed, and in 1839 the plants grew from two to two and a half feet high, ripened and yielded an increase of only five fold.

This increase was again sowed, and in 1840 the crop bore a striking resemblance to genuine wheat. It was sowed that fall, and in 1841 the product was a crop of ears more closely resembling true wheat. Great and important changes were observable in the grains of this third crop. There was no longer any barren spikelets, while all of them were in every respect like wheat, each one bearing two or three perfectly developed grains. These were sowed, but in 1842 the crop was almost entirely destroyed by rust. The few grains saved were sowed, and in 1843 the plants grew three feet high, the straw being firmer than before, and less brittle. The ears were less fragile, and resembled wheat exactly. One grain yielded 300 grains for one sown, and another 450. Planted again, and in 1844 all the spikelets were fertile, and many of them contained three grains. In 1845, all who examined the crop adjudged it to be true wheat. M. Fabre so regarded it himself, and in 1845 he sowed the grain in an open field, and for four succeeding years continued to produce it with equal success, the yield being six to eight times the seed sown. The stems were straight, solid, and were thirty inches high.

This remarkable result excited the liveliest attention from the learned men of Europe. It con-

firmed the position of one set of disputants, who maintain that by climate, soil, position, and culture, plants may permanently change their characteristics, while it covered with confusion some of the most eminent French botanists. Instead of according merit to the simple gardener who for twelve years had patiently labored to solve a great botanical problem, they impeached his veracity, and accused him of producing a mere hybrid, forgetting in their zeal that if so, it was one which possessed the rare quality of reproducing itself. This series of experiments is pronounced by Mr. Kippart of Cincinnati, in his recent exhaustive work on the wheat plant, to be pregnant with the most important consequences. He thinks that if wheat must be regarded as of an allied genera of the *Egilops*, it proves that botanists were not sufficiently familiar with the character of the plants when the classification was made, and that such identity will reconcile the traditions, the vague and disconnected accounts of the origin of wheat, which in ancient as well as in modern times, was claimed to be found in Babylonia, Persia, and Sicily, as in all of them the *Egilops* is very common.

Wherever the foot of civilized man has penetrated, this symbol of his power has gone with him. California, the latest illustration of this fact, which ten years ago imported vast quantities of flour, is now an exporter of food. A not less curious fact is the number of varieties of wheat, and the apparently capricious taste of of growers in selecting particular sorts for cultivation. The origin of some of these varieties is equally curious. The Hunter wheat, so extensively cultivated in Scotland, sprung from a single plant accidentally discovered in a large field. The Ohio Lambert wheat had a similar origin. Whence these varieties proceed no one can say. A field of the kind long cultivated on the same farm, shows a strange head in its crop. It may topple up higher than its neighbors, or it may be larger and fuller, but from some cause attracting notice, it is preserved and propagated. The difficulty is to say where it came from. A bird has probably picked it up in a northern climate which produces a hardier berry, and flying south, has dropped it undigested, on a field already sown, in season for vegetation to follow. This theory is sustained by the well known fact that any variety of this grain which is taken much south of its usual locality and there sown, will present a more vigorous and hardy appearance than its neighbors that have been already acclimated.

It is also known that all the varieties imported from Europe and now the standards in our best wheat regions, came from high latitudes. The most popular of them is the Mediterranean, which is in reality Danish or Norwegian, the common name of Mediterranean being a misnomer.

The wheat plant is much more sensitive to heat than it is to cold. If it be steeped for only fifteen minutes in water ten degrees above the boiling point, its vitality is destroyed. In northern latitudes the plant lives 180 days, but in Mexico only 100. Hence it is that our extreme Southern States have never been great wheat producing regions. Climate alone forbids it, even if the soil

were the right one. Wheat requires a soil rich in phosphates, just as the vine requires lime. Every plant seems to need a specific stimulant. The tea of Java is inferior because the soil is overloaded with the salts of iron, a cause to which the Nankin cotton owes its orange color. Wheat also has its favorites in the catalogue of manures. British agriculture, aided by chemistry, has discovered what they are, and having used them freely, is rewarded by crops that nearly treble the yield of half a century ago. These are the phosphates. Distant countries are exhausted of bones to supply them, and quantities of phosphatic fertilizers are manufactured at home, to meet the growing demand.

Winter killing is constantly complained of by farmers without the causes being accurately known. If sowed too deep, the grain produces so few roots that it cannot afford to lose any of them without perishing. When the ground freezes and thaws many times, at each freezing it cracks open. The roots extend across these cracks and are torn asunder, thus depriving the plant of its necessary nourishment, when in many instances it perishes outright, or maintains a sickly, unprofitable existence. Sometimes the crop is thrown entirely out of the group when it is sure to perish, as the chance of forming new roots is gone. The natural remedy for such calamities is known to be a deep covering of snow. As the plant, during winter, exerts all its energy in developing roots and leaves, leaving spring to form the stalk, and summer to perfect it, a heavy and lasting snow keeps it so warm as to allow this emergency to act, besides effectually protecting its roots from rupture by alternate freezing and thawing. But seasons occur when no snowy blankets fall. The artificial remedy is underdraining, and if done thoroughly it may be pronounced effectual against winter killing. British agriculture abounds with proof of this, and in this country, since underdraining has been introduced, there is much confirmatory evidence. Our severe and variable climate renders it much more necessary than in England.

One of the most marvellous faculties of the wheat plant is that of sending up a multitude of stalks from a single grain, known as *tillering*. It is the secret of its great productiveness. Many experiments have been made to ascertain the limit of their faculty, and the results have been truly wonderful. An English gentleman sowed a few grains of common red wheat on the 2d of June, one of the plants from which had tillered so much by the 8th of August, that he then divided it into eighteen others, all which were separately. In a few weeks so many of these had again multiplied their stalks, that he had set out sixty-seven altogether to go through the winter. With the spring growth all these began tillering, so that in March and April a new division was made, and the number of plants increased to 500. It was believed that another division might have been made, and that it would have increased the number to 2,000. The 500 grew most vigorously, exceeding plants as ordinarily cultivated. When harvested, a single plant yielded over 100 ears, and the whole number of ears produced was 21,169, or more than forty to each divided plant,

and the grain measured three and three-quarter pecks, weighing forty-seven and one half pounds. The grains were estimated as numbering 576,840. All this was the product of a single grain.

We hope none of our readers will pass over the reading of the above, but we do not ask them to subscribe to the Gilops theory, yet without that they will find much to interest them. The wheat plant to this State is its commercial tower of strength, and we shall continue to urge its importance upon our readers. With improved culture we shall hope to see the product doubled. At this writing, April 8th, our spring wheat presents a broad expanse of green nearly equal to the winter. ED.

The Farm and Garden.

A LOOK THROUGH TWO HUNDRED MILES OF COUNTRY.

THE STARTING POINT.

March 5th.—The city of Champaign, as most of our readers know, is one hundred and thirty miles nearly due south from Chicago, and may well be called the great corn station of that prolific corn region, Central Illinois. At this time there is an embargo of mud laid on the roads, and the shipping interest is at a stand-still, though the cribs that make no small show about the warehouses will be drawn on until the roads improve, when the village (city!) will again show its wonted activity, as the stock of corn in the country is yet large. Of potatoes there are but few to go forward from this point. But little winter wheat was sown last fall, but this little looks very promising. A few farmers commenced sowing spring wheat last week, but the heavy rain of the 2d and subsequent frosts have arrested further progress in this direction, for a week at least. A very large breadth of this grain will be sown at this point. All of the stations as far south as Mattoon deal largely in corn, but ship no potatoes; in fact the potato region ends at this last named point, which is just within the southern rim of the black or mulatto soil of Central Illinois, and at the top of the slope whence we descend into Egypt. Here we are over a hundred and fifty feet above Lake Michigan, and four hundred and fifty feet above the Ohio at Cairo. All south of this over the greyish lime mud drift of Upper Egypt, the drouth made sad havoc, and consequently no shipments of corn are made south of Mattoon. The corn fields have been pretty generally sown with winter wheat, which presents a promising appearance, and notwithstanding the Hessian fly made a vigorous demonstration against the new crop, yet its natural enemy, the ichneumon fly, made so vigorous a one on the pupa of this marauder that the crop will

nearly recover from the injury done it early in the season. It is now probable that from the presence of this enemy of the Hessian fly that its destructive powers will be very much curtailed, and when the fall weather is favorable to a vigorous growth as the last one, its ravages will be scarcely noticed. Before reaching Centralia night had closed in and we took to the sleeping car, and arrived at Cairo at four a. m., but slept undisturbed until the breakfast bells around announced that even in Cairo it was necessary to attend to that important duty, but we soon learn for the thousandth time that bad coffee and poor cooks will sometimes insinuate themselves even into large hotels.

THE BUSINESS AT CAIRO.

March 6th.—Transferring of freight from the railroad to river craft and the coaling of steamers are the principal things done here. The wholesale grocery trade is limited to two or three small houses. It would appear that Cairo should be the great point for the distribution of goods to the south part of our State, part of Kentucky and Missouri. The truth is, groceries are sold extremely low, but the want of large stocks of dry goods, boots and shoes, hardware, etc., make it no object for the country dealer to visit Cairo for the simple purchase of his groceries, but with the new impetus now given, it is very probable that the time is not far distant when more attention will be given to this department of business. With levees, it is always a slow and expensive process to re-ship goods of all kinds and especially grain, though we see no reason why steam elevators cannot be used here for the latter, and thus save the cost of sacking, which is a severe drawback to shipping South. It costs on an average about nine cents a bushel for the sack and sacking. Take, for instance, Champaign, which is the center of the great corn zone. The shipper pays:

16	cents for the corn in the ear.
3	" shelling and shipping.
9	" freight.
1	" selling,
2	" buying.

— 31 " total cost in Chicago.

Selling at twenty-eight cents—a loss of three cents per bushel. To send this same corn south, costs as follows:

16	cents for corn in the ear.
2	" buying.
4	" shelling, sacking and shipping.
8	" gunnies.
22	" freight to New Orleans.
1 $\frac{1}{2}$	" transferring to river at Cairo.
1 $\frac{1}{2}$	" insurance.
2	" commission, selling and dockage.
—	
56	" total cost in New Orleans.

Selling it at fifty-five cents—loss one cent. Now, if the corn could be shipped in bulk, the margin would be largely in favor of the South. While corn is only worth fifty-five cents in New Orleans, it is worth much more at other points and shippers are looking to this matter. There

can be no question but that Cairo instead of New Orleans should be the head quarters of the grain trade for the South instead of New Orleans as now.

The advantage would be to ship it direct to those points wanting it, without breaking bulk. It could be put in gunnies at the place where wanted, and thus make a large saving in shipping gunnies both ways. The consumer would return them to the warehouse, and thus they would be used several times; but now they are of little value after once being used. We would advise all parties shipping south to consign their corn to parties in Cairo and order them to sell or ship it to such points as offer the best markets. We saw the captain of a small steamer that had just returned from one of the interior rivers, and had made twenty cents on the bushel over the usual freight and charges by not breaking bulk at New Orleans. A large part of the corn sold in New Orleans returns north to find a market, and thus the extra cost to the consumers, and at most of the intermediate points is selling at a dollar per bushel. It is thus the height of folly to ship to New Orleans when Cairo offers greater advantages, while at the same time it would be giving a large amount of business to our own State that now is done at an inconvenient point. We hope our dealers will look to this matter and see if something can be done to advance the interest of our producers. The railroad company have ample conveniences for transferring to the wharf boats, but it appears to us that these could be so arranged that goods and grain could be so arranged that goods and grain could go at once on to the steamers. Messrs. Graham, Halliday & Co. have a large wharf boat, but so great has been the increase of the business that they are building and have nearly ready a mammoth new wharf boat. It is 330 feet long by 75 wide and capable of holding 8,600 tons. This, in addition to the boat now used, will relieve the depot and levees of their large piles of freight, which to no small extent is now subject to damage by a sudden rise of the river. There are several other wharf boats at this point, mostly employed in breaking bulk for river craft, as large amounts are transferred from the large to the small up river steamers. The shipping of corn has so slackened up that only some seventy car loads are in store. Each car contains some one hundred and sixty sacks of two and one-fourth bushels each, and must be carried by men on an average of some two hundred feet each, besides the passage down the levee on the railway track, or in slides. This to persons in the habit of looking into the Chicago elevators, appears to be a slow and tedious process.

About twelve hundred tons of Illinois produce is shipped south daily, and some two hundred tons of groceries go North per day, and two thousand bales of cotton per week from Memphis, and two hundred from other points. About two hundred tons of tobacco, corn and pork are received daily from the Wabash, Tennessee and Cumberland rivers, and re-shipped South. It will thus be seen that Cairo is assuming somewhat of that importance in trade that its friends have claimed for it. The line of eight steamers from

here to New Orleans has been of vast use, and without which the business could not have been done. They carry from one thousand to fourteen hundred tons each, making an average of 5,000 tons per week. A large number of other boats are in the trade, but run independent. Cairo has improved within the past year. The levees have been substantially rebuilt, and the inhabitants no longer fear an inundation. The flood of 1858 destroyed all the shrubbery, shade trees and plants, and the citizens are now busy replanting them. Sugar, tobacco, etc., instead of going into warehouse, as at the north, lay on the levee and are protected by tarpaulins, but a sudden rise in the river would make a hurrying time to get it above high water, as the difference between high and low water is forty feet, and reaching within two feet of the top of the levee.

COBDEN AND THE PEACH ORCHARDS.

Since the first introduction of budded peach trees, the prospect of a full crop of these superior varieties has not been so promising as at present. Not a blossom bud appears injured, and at this time they are nearly ready to burst into bloom; three or four days and the peach orchards will present a sight worth beholding. The native seedlings are nearly a week behind the budded varieties, and it is this difference that may account for the destruction of previous crops of the more choice varieties. The budding of the peach appears to change its nature, making it more impatient of frost, and starting the buds on the approach of warm weather. Hence the danger on warm days in winter or in warm locations. This point is to be overcome before the more choice varieties will give satisfaction to the orchardist. We hear no particular complaints on this head from the Michigan orchards, and the difficulty may be only in this location. In our own grounds this wide difference is not so apparent, though the budded trees are less reliable than the seedlings. If nothing untoward should occur, the North may expect an abundance of fine peaches at reasonable rates. The peach orchards have been rapidly extended, and within the next five years the trees will have attained a size capable of growing a large amount of fruit. For the first time some attention will be given to the protection of the fruit from the ravages of the curculio, which has thus far been a serious drawback to this delicious fruit. Mr. Colby, formerly of Janesville, will lead off in this insect crusade, and we hope with success. The vineyard of Col. Bainbridge, of some two acres, gives promise of a good crop of fruit, the canes are strong, the ground in most excellent condition, and the vines pruned and tied to stalks in the most approved Cincinnati mode. The cat-bird and oriole have shown a fondness for grapes, and last year took more than their proper share of the straggling bunches produced by the young vines. It is feared that their numbers and voracity may make serious inroads into the crop, as they have the impudence to pick out the ripest berries of every bunch. The woods here swarm with these birds, and it will be difficult to prevent their depredations, and our main hope is in growing too large crops for them.

The Catawba is the principal variety now in cultivation, though Mr. Freeman and others are trying Norton's Virginia and other new sorts. We saw extensive hot beds of tomato plants many of them ready for the cold frame, that is, they are transferred from the hot-bed at about two inches high to the open ground, in beds, over which is placed the usual hot-bed side boards and sash. They stand in these until danger of frost is over, and at that time are nearly or quite in bloom; this is something like repotting in green houses and put them forward at a comparative cheap rate, as several plants can thus stand under a square of glass. Lettuce for the Chicago market is cultivated to some extent at this point, we saw two long ranges of cold frames filled with this plant, a portion of which is to be sent out next week. The seeds are sown in the latter part of summer, and are reset in beds five feet wide from by six inches apart in the rows, about the first of October; they thus get well rooted before winter, but in this mild climate they need no other protection than rough boards for the sides, upon which the glass frames rest. Sometimes the ground becomes slightly frozen, but though most of the winter they continue to grow, and are thus early ready for market. The plants are pulled up, packed in barrels and shipped by express. The great drawback to gardening at this point is the want of capital, manure and cheap transportation. Capital and skill are fast accumulating, and the growing of clover and Hurd's grass, which are now attracting attention, will soon supply the manure for hot-bed purposes, and as to freights, we shall have less complaint hereafter, both from the I. C. R. R. and the Express Co.

EVERGREENS.

Around the rocky ledges of the "Grand Chain," and within a few miles of this point are large quantities of seedling plants of the red cedar, and as the cedar makes an excellent low screen for garden and house grounds, they are in demand, and at this time several parties are busy gathering and packing them for the prairie region. Plants about six inches high are put up for about five dollars the thousand, or half a cent each. This will make a cheap and desirable screen. We know of no point at which good plants can be so readily and cheaply obtained. We have frequently said that these Egyptian forests contained a mine of wealth, wherewith to beautify the prairie, and we take pleasure in pointing out this one just opened.

Jonesboro is six miles south of Cobden, and we learn that large plantations of gooseberries and strawberries are being made. Rhubarb does not appear to thrive; it is a gross feeder, requiring muck and manure, and both out of the question here.

ASHLY, March 7.—A soaking rain throughout the day has prevented a look into the country. Vegetation is a week behind that at Cobden, but the promise of fruit is good. At this point there are large numbers of small apple orchards, and also of seedling peaches, but winter wheat is the great staple which now looks very promising. There is a demand for seed oats at all the small

stations in this part of the State. For two years the rust has destroyed this crop, and last season but few were sown, but proved a good crop, and now the farmers are willing to try again. The failure of the wheat and corn crop last season makes a pretty general complaint of hard times.

CENTRALIA, March 8.—Within the last three years, considerable attention has been paid to fruit culture in this vicinity. A large number of the employees of the I. C. R. R. have fine gardens in the village, and in no part of the State is there so much attention paid to the growing of fruits and vegetables for family use at this point. Mr. C. A. McIntross, one of the passenger conductors, has one of the finest fruit and vegetable gardens in this State, and is now busy in filling some vacant lots with dwarf pears, over three hundred of which he has set out. Such examples as this will have a most valuable effect among conductors and employees, professional men and mechanics. Our villagers pay too little attention to this subject, but we hope to wake them up to a proper sense of its value. At three o'clock conductor Robinson, signaled the brakes and we found ourself at home

RURAL.

Abstract of Reports from Various Counties in the State as to the Condition of Leading Growing Crops, and other Subjects of Special Interest to the Farmer.

ROOMS OF ILLS. STATE AGRICULTURAL SOCIETY, }
Springfield, April 2, 1861. }

FOR MARCH.

Macoupin County.—Reporter, T. L. Loomis, Carlinville.

Entire area 552,990 acres, one third in cultivation.

Fall Wheat—37,000 acres sown in the fall of 1860—uninjured by the winter, never looked better in March. Less sown last year than usual.

Spring wheat—10,000 acres sown and being sown—ground favorable to good seeding.

Fruit—Prospect good. Peach buds not killed.

Quantity of wheat in the hands of producers, 100,000 bushels.

Quantity of corn in the hands of producers, 9,000,000 bushels.

No serious damage to either of the above crops from insects was suffered last year.

Edgar County.—Reporter, Dr. William Kile, Paris.

Fall wheat—One-fifth more sown than usual. (This is a large and fine wheat growing county—Ed.) Present condition and prospect of this crop better than ever before.

Spring wheat—None sown yet (March 12).

Fruit—Condition of the buds yet good, though peaches are much swollen in souther exposures.

Quantity of wheat in the hands of producers—about one-fifth of surplus.

Quantity of corn in the hands of producers—two-thirds of the surplus. Owing to high railroad rates and low markets at St. Louis, there has been a dead lock in the corn trade in that direction. Our shipments have been mostly South via Louisville, Ky.

Insects—In some sections the fly injured early sowed wheat, but not seriously.

Large preparations are being made for farming the coming season. Stock of all kinds fat and fine.

Union County.—Reporter, J. A. Carpenter, South Pass.

Fall wheat—No estimate of quantity sown, condition very promising.

Spring wheat—None.

Fruit crop—The swollen blossom buds are all sound.

Quantity of wheat in the hands of producers—No estimate.

Corn in the hands of producers—No surplus. (Southern Illinois, as a general rule, produced no surplus of corn in 1860, owing to a severe drought—Ed.)

Insects—The Hessian fly injured some pieces of wheat last fall, and the corn worm injured late planted corn.

Average yield of wheat per acre, with good cultivation, 20 bushels, though oftentimes the yield is far heavier—quality, best.

Lawrence County.—Reporter, J. B. Watts, Lawrenceville.

Fall wheat—Number of acres sown, 15,000—condition never better.

Spring wheat—Number of acres sown, 200, put in well and in good season.

Very little wheat in the hands of producers.

Corn—One-fourth of surplus in the hands of producers.

Insects—Hessian fly attacked some pieces of wheat, but did no serious damage. Farming prospects for the coming year good.

Macon County.—Reporter, J. H. Pickrell, Decatur.

Fall wheat—More than usual sown—cannot now estimate the quantity sown. Condition: All concur in reporting it as good as ever before.

Spring wheat—Little sown yet—preparations are being made on a large scale. A few men will sow 1,000 acres (each?)

Fruit—Peaches are thought to be killed except in protected localities—other varieties not injured.

Quantity of wheat in the hands of producers—No surplus.

Quantity of corn in the hands of producers—Everybody answers, "more than we know what to do with." No estimate can be made at present. (In the great corn producing belt across the centre of this State, of which Macon is a fair representative county, the quantity of corn still in the hands of producers, notwithstanding the large shipments heretofore made, and the quantity fed to stock of all kinds, really seems to defy all estimate.)

Henry County.—Reporter, V. M. Ayres, Cambridge.

Fall wheat—Number of acres sown, 300. Condition: suffering from drought, and appears drooping. Our farmers are discouraged trying to raise it.

Spring wheat—Just commenced sowing.

Fruit—Can learn nothing yet.

Quantity of wheat in the hands of producers—No surplus.

Quantity of corn in the hands of producers—Every farmer has from 100 to 3,000 bushels to sell.

There were 10,000 acres of broom corn raised in this county last year—not yet generally sold.

One hundred and fifty acres hemp—More particulars in next month's report.

DeKalb County.—Reporter, H. L. Boies, Sycamore.

Fall wheat—Number of acres sown, 200; condition: somewhat winter killed, but looks better than usual at this season.

Spring wheat—Not yet sown, but there will probably be sown about 85,000 acres.

Corn—Probably be 400,000 acres planted.

Fruit—Promises well. No particular injury yet.

Quantity of wheat in the hands of producers, 600,000 bushels.

Quantity of corn in the hands of producers, 300,000 bushels.

The foregoing reports are the first attempts on the part of the gentlemen making them.

But few circulars were sent out last month. Nearly all have been responded to. More will be issued for this month, and as the season advances the number will be increased, and we trust the interest and value of them will be enhanced. The estimates will be made with greater ease and accuracy as the gentlemen making them become more accustomed to the work and receive the assistance of others in each county whose judgment and opportunities for observation are good. After a time, it is intended to embrace every county in the State. *Will not each County Agricultural Society appoint one person to collect statistics and report monthly as above?* A few societies have already done so, and it is hoped the others need but the suggestion to induce them to adopt the same course.

The reports for each month should reach me by the 25th of the same, that they may be published on the first of the following.

JOHN P. REYNOLDS,
Cor. Sec. Ills. State Ag. Society.

The above reports are full of interest, and we hope they will be forthcoming from every county in the State. We have now a live practical man at the Secretary's desk in the State Agricultural rooms at Springfield, and we shall continue to see accumulations of useful knowledge. ED.

—The papers relate an anecdote of a beautiful young lady who had become blind, having recovered her sight after marriage. Whereupon Snooks wickedly observed that it is no uncommon thing for people's eyes to be opened by matrimony.

Copeland's Broad Cast Grain and Grass Seed Sower.

Dr. Robert D. Foster, of Loda, Iroquois county, (Oakulla P. O.,) sent us one of the above seed sowers for trial. "Our farmer" has sown twenty-two acres of spring wheat with it, and twelve acres of grass and clover seed mixed. The first sowing of the wheat is up and presents an even cast, much more so than the average of hand sowing. The grass seed is sown in a very superior manner; it was intended to put three bushels on the twelve acres, and on finishing he had just a pint of seed left, showing that it is possible to very nearly regulate the quantity per acre. On the first trial with the wheat he fell short of getting two bushels to the acre, so the machine has not the capacity to sow quite that amount, but is graded for about one and a half bushels per acre; of course, by taking very short steps the two bushels can be accomplished, but the better way is to enlarge the wings of the sower, when any amount, from a quart to three bushels, could be sown. In considering the value of any new machine at this time, when economy is the order of the day, we must take into consideration the cost of the implement, its durability, cost of repairs and amount of labor it will save, or the increased value of the crop in consequence of its use. We will suppose that in sowing, nothing is saved but the real difference in the value of labor. To sow one hundred acres will require a good hand ten days hard labor, which, at a dollar a day, is ten dollars; this same work can be done by the same man with ease in four days or less, with this sower, which will be four dollars, and making a saving applicable to the cost of the machine of six dollars, but this is not all. During the ten days of sowing we have no small amount of windy days; in fact, with the exception of the morning and evenings, the wind is too high to make sowing by hand either a pleasant or profitable operation, from the fact that in a wind we are liable to ridge it: that is, sowing very thick on part of the ground and too thin on

the other. By the rapidity that the work can be done with this, the mornings and evenings can be appropriated to the sowing, when it can be done much better, either by hand or with the sower, when it is comparatively calm. This, at least, to our mind, would decide us in using the machine for the one hundred acres of sowing, and which in the saving of labor and the better performance of the work would fully compensate for the ten dollars invested in it. We would therefore make the purchase if we had one hundred acres to sow in one year or twenty-five for four years, for at that rate it would be paid for, and leave all beyond that a clear gain. With grass and clover seed the case is a still stronger one, for there is a saving by the use of the machine of two-thirds in the labor, besides doing the work vastly better than can possibly be done by hand. The sowing of grass seed by hand is a slow and tedious process, and must all be done during calm weather, and in March the mornings and evenings are almost the only time that is suitable for this operation. With this sower from twenty five to thirty acres a day can be sown in the most perfect manner and without any extra effort. These sowers can be made to run by horse power, but we have some doubts whether the increased cost will be met with a corresponding benefit—certainly no ordinary farmer will need anything more than this hand sower, for one man will sow thirty to forty acres a day of the small grains, full as much as can be harrowed in by the usual number of teams on this sized farm; besides, we think the sowing will be better done by hand in this way than with horse power. The machine sent us was made very light, being the one used as a working model at the Fairs where exhibited last fall, and lacks size, as we have before stated; the slide is regulated by a spring instead of a groove, and the motion is communicated by a band instead of gearing. The machine thus made would be adapted to all broadcast sowing, and would last a lifetime with few, if any repairs. A

farmer sowing twenty acres annually of wheat or other small grain, or ten acres of grass seed would find a saving to use this machine over the hand seeding.

We have no faith in the drill for spring grains, while grass seed must at all times be sown broadcast. When the drill is used it is not uncommon to attach a grass seed sower, at a cost of ten dollars, that will sow only as many acres in a day with two horses as one man will sow with this sower by hand. Without any hesitation we pronounce this a valuable labor saving machine, not only in regard to the saving of labor, but in the superior manner in which the work is performed. It is efficient, durable, and easily managed by any ordinary farm hand or boy of a dozen years of age. When we take into consideration that but few persons are good hands at broadcast sowing, it is desirable to have some implement with which the work can be at times easily and well done, and this machine accomplishes all of this in the most satisfactory manner.

Plowing by Steam.

We are repeatedly asked if plowing by steam is to be abandoned, or at least to give some information of the progress that the invention has attained. It has been our intention for some time to review the efforts made and making in regard to plowing by steam. The main reason of our delay has been that sixteen months since we wrote on this subject, when Mr. Fawkes and his friends considered our views of the then condition of the enterprise, even if truthful, as tending to discourage and retard its perfection, by alarming capitalists who were disposed to give the aid needed for further experiment, which it was hoped might result in its complete triumph. Whether the reasons were good or bad we have, in due deference to this wish, oft repeated kept silent, but we think the time has come when we might speak out and freely express our views in full. Should Mr. Fawkes or any other person be ambitious to enter the lists we shall most cheer-

fully accord him space in our columns. The enthusiasm has so far cooled down that the subject can be carefully investigated on its merits and handled without danger of an explosion. We confess that we have had hopes that steam power, to some extent, would have been applied to the culture of the soil; that at least on the unbroken prairie and tough sward, that it would assert a supremacy, but we have given up this pleasing hope as an illusion now completely dispelled. And further, from the best information that we possess, that the stationary and movable steam engines used for threshing and other farm purposes, have not given the satisfaction anticipated and are now less popular than two years since. That steam, for ordinary purposes, must yield to the horse, the mule and the patient ox, we have no doubt. At the same time, for all manufacturing purposes, where the power is stationary, and can be used almost constantly, or when the interest will not eat into the capital, or rust make holes through boilers, or corrode the journals while standing idle, it will succeed, but for farm purposes these difficulties appear to meet us at every turn. We have contended that an engine might be constructed to break up the sward, to thresh, grind sorghum, corn meal, saw wood, and by thus giving it constant work might be made to pay, but we find so few farmers prepared to do all this variety of work, that even under this aspect of the case we do not look for any practical results.

WATERS STEAM PLOW.

That Mr. Waters has brought his plow into the field and broken up some one hundred and fifty acres of prairie, does not settle the great point, or answer the question in the affirmative, will it pay? It has only reaffirmed that plowing by steam can be done, not that it will enter into the economy of the farm. He has excellent engines, with driving wheels of ten feet diameter, and so constructed that they can pass over comparatively soft sward, to very good advantage, and are well provided with appliances to hold

on the soil, to give them great tractive powers; his plows run on wheels, set in frames, to relieve them of friction and dead weight, yet we well know that the whole thing thus far is not a paying success, for if it had been, would not a larger quantity have been plowed? If two dollars an acre is a fair price for breaking, three hundred dollars is no very striking result for one summer's work with an apparatus, the interest on which alone would absorb the total amount, to say nothing of running expenses and repairs. It is not so much as two three-horse teams and two men would do in the ordinary breaking season, say from the middle of May to that of July. But the gang plows "do not work well," is the reply. No, nor do we think they ever will. If the surface was a perfect level or a true inclined plane they might do, but to expect to have them work well on an uneven surface is more than they have bargained for. Besides the objections to the plows which is insuperable, the engine does not turn readily at the corners or ends of the lands, and except for long stretches of prairie it will not answer, being too unwieldy and unmanagable; doubtless this difficulty might be overcome to a greater or less extent, but on this point we shall speak hereafter. We learn that Mr. W. is sanguine of success, and that notwithstanding all the discouragements thus far, he intends to so improve his machine by the opening of the summer breaking that it will convince the the most skeptical that steam plowing is and will be among the economic facts of the day. It is with a deep regret that we are compelled to take a less favorable view of these points. We do not claim to have any particular genius for invention nor intuitive knowledge to discern the final result with prophetic ken, but we have watched every move in this steam plowing, and have so often pointed out the place of failure, that we have from practice become satisfied that our judgment is more than a match for the sanguine visions of the inventor. Mr. W. has kept quietly on his way and has avoided

rather than sought popularity. That he is a most excellent and capable mechanic and an inventor of no ordinary order we must admit, when we examine the power and economy of his engine and the immense tractive ability of his huge, though not heavy driving wheels. Such a man richly earns success, and when he fails we can but look upon the scheme as impracticable.

STEAM PLOW OF MR. FAWKES.

We will next proceed to inquire what progress has been made in the direction marked out by Mr. Fawkes since the trial on our farm in November, 1859. It was then voted a failure, and so we conclude its inventor regarded it, after having plowed four acres in a fair test at prairie breaking, upon one of the most favorable pieces of land that could have been selected. Instead of resuming work in the spring, as promised, by an enlargement of the boiler, which was found to be too small, he proceeded to get up another engine in Cincinnati, costing some six thousand dollars, as we are assured by the person advancing the capital. The machine was taken to the farm of Michael Sullivant, near Homer, in this county, where it was to have been employed in prairie breaking, but from what we can learn it proved as decided a failure as did the Lancaster, the preceding year. In getting up this machine Mr. F. had the assistance of some of the best mechanical talent of Cincinnati, and certainly at a shop second to no other in the United States, for appliances to make it a success. The fact of getting up the new machine with the openly avowed assistance of Mr. Miles Greenwood, of Cincinnati, could be taken in no other light than an acknowledgment of the failure of the Lancaster, as we at the time charged, but which was stoutly denied. We only recur to this fact to vindicate ourself from the charge of any unfairness in our articles alluded to, only proving that we were right in our estimate of the impracticability of the invention.

The latest news that we have from Mr. F. is that he has abandoned the tractive plan

as impracticable, and is making efforts to get up a machine something after the English plan, by stationary power, drawing the plows with a chain that winds around a drum; with this difference, however, the engine is a tractive one to move along the land and at intervals of, say a thousand feet, to be firmly anchored so as to draw up the plows, when it will again drive ahead and repeat the operation. This is not official, but we have it from a source in which we place great reliance. Mr. F. is entitled to great praise for his perseverance, but while we concede to him all the usual and more than dogged persistency in common with inventors to work on, determined to win success, we are not willing to accord him a high position as an inventor. It is evident that he lacks all the elements of mathematical development necessary in the broad field in which he assumes to work out new principles and to obtain new powers. In his endeavors no small amount of capital has been sunk without doing more than to prove beyond a doubt that no valuable progress has been gained, and we may safely say that so far as success is concerned, that we are no further advanced in this direction than we were ten years since; and we will predict that the next ten years will make no further progress. We have met the wall of adamant, beyond which steam cannot push on—it has its practical limits, and here its giant force is stayed.

WHERE THE STEAM PLOW CAN WORK.

It can work on a solid sun-baked level surface, like that on which the trial was made at Centralia, for on such a surface the tractive power is only limited to the capacity of the engine, and we approach nearly to the condition of a locomotive in the drawing of a freight train on a tolerably level road. The surface must be so hard that the drum or propelling wheels shall not sink into the soil, and so firm that it will not yield so as to allow the wheels to slip; this, and this only, is the condition of the soil when a tractive engine can be made to draw a sett of

plows. As this condition is seldom attained, we may put it down as a conceded fact, in practice, at least, that no man will invest in so expensive a farm implement, and wait for the favorable time to plow, when he can do it at a cheaper rate, and at the right time, with the usual appliances of horse, ox or mule. So much then for the practical condition to operate the steam plow.

WHERE IT WON'T WORK.

We might say with one sweep of the pen that it will not work on any other place but the one before indicated, but we will point to some of them. It will not work on common prairie sod, where the land is undulating, on the general principle that locomotives are not well calculated to work up sharp grades, and at the same time draw heavy loads like the drawing of several plows through a tough sod. This, when coupled with soft places that occur more or less in all prairie breaking, and which as a general thing will interpose an insuperable obstacle to success. Of course, there are small tracts where these do not occur, but this is the exception, not the rule. It will not work at all on plowed land, whether wet or dry. It will not work where the ground is soft by recent rains or wet on the surface, whether on sod land or any other place. It will not harrow in grain, plant corn or draw the reaper, nor can it be used for mowing under scarcely any probable condition of things. It cannot be used for ditching with any hope of successful competition with the spade, and the only place it will drain is the pocket of any person who may be ambitious to make a practical test of its value.

WHY IT WON'T WORK.

We might answer this question by asking why locomotives have not come into general use on common roads. That they have not, we all know, and yet we have now and then startling accounts of success in this direction. When we know that a grade of forty feet to the mile on a well constructed railway re-

quires double the power to draw a train, we can readily see why a tractive engine will not work to advantage on the ups and downs of a farm. On a large proportion of prairie farms the grades present an insuperable obstacle in the way of success; the rise of ten feet in the eighth of a mile would prevent its use, and yet how often do just such grades occur. Water tanks and wood yards are not placed at intervals as on a railroad, but must come from a distance, and if not hauled by the machine itself it must have the aid of teams, which of course will seriously add to the expense. The amount of wood and water to run a twenty horse power locomotive half a day would make quite a respectable load, and would at the outset so cripple and load down the machine that it would make no very rapid progress at plowing. The distance to and from the field would require no little amount of steam to accomplish it. It certainly would never do to haul water and fuel to the field with horse power, and when we look at the cost of taking them out on an engine we can but think that it is worse economy. But the most serious objection is the cost, or the capital necessary to be invested, in itself enough to purchase and put in order a respectable farm. An engine and set of plows of the capacity and size of that of Fawkes' or Waters' will cost about four thousand dollars.

The interest on this sum, at ten per cent., is.....	\$400
Wear, per annum,.....	400
Two men, sixty days,.....	150
Fuel and oil, \$20 per day.....	1200
Repairs.....	200
	<u>\$2350</u>

By fifteen acres a day of fifty running days at	
\$2 per acre, 750 acres.....	\$1500
Net loss.....	<u>\$850</u>

As we can only use it for prairie breaking fifty working days is a good allowance of time, and an average of fifteen acres a day as much as we are willing to admit can be done. This is upon the supposition that the lay of the land is adapted to its use, but we know that in any township it will be impossible to

select any tract of seven hundred and fifty acres that can be plowed at all by a tractive engine. Even should it plow an extra five acres a day, which we hold is out of the question, it would still cost over the two dollars per acre.

THE COST OF BREAKING

It may be contended that we have put the cost of breaking at too low a figure, and that the customary price is from two dollars and fifty cents to three dollars. This, we grant, has been the case, but we will remind all such persons that by the invention of such plows as the sixteen inch clipper breakers, two heavy, or three light horses, with one man, will average twelve acres a week of the toughest prairie sod. These plows have an extra share, which prevents the necessity to lay by half a day at a time for the purpose of sending to the shop for sharpening. Nothing but an actual rainy day will prevent work with the team, while the steam plow cannot run when the rain has softened the surface. Such a team will break up in sixty days one hundred and twenty acres, which,

At \$2 per acre, is.....	\$240
If we deduct for the men, 60 days.....	\$60
Sixty bushels corn, at 30 cents.....	18
Sharpening and wear of plow.....	12
Use of team.....	60
	<u>\$150</u>

Leaving a profit of..... \$90
Or at a cost of one dollar and twenty-five cents an acre, which is what any farmer can break his own prairie for. The truth is, the cost of prairie breaking has been much exaggerated, as it is not really much more labor to break prairie the usual depth, with a suitable plow, than to turn our old land seven to eight inches deep. Much of the cost of the breaking has been due to the bad construction of the plows, and we must say that there are few shops at which first-rate breaking plows are made. We have never seen a good twelve inch breaking plow as yet, though there may be such.

FAWKES' NEW PLAN,

Or rather the old English plow rearranged, is destined to a short life on the prairie,

when grain is so cheap with which to feed the team. The time spent in anchoring of the engine, the hauling up of the slack and the clogging of the gang of plows will soon show such discouraging results that it will not be repeated on an extensive scale.

ROTARY DIGGING.

A year since, and this new style of pulverizing the soil was to take precedence of all other modes of culture. The objection to working up grades did not apply to this mode in so serious a manner, but in practice nothing was gained. The earth had a way of adhering to the spaders not laid down in the programme, nor would the rubbish and granite boulders walk out of the way to please the inventor. It appears dead and buried beneath the pulverized loam with which it filled the air. Peace to its *manes*, paddy and his spade are yet veritable economic institutions, and for all the rotary digger may accomplish, are like to so continue.

A NEW STEAM PLOW.

Since writing the above we have been called on by the agent of "Gatling's steam skavering machine." Don't be alarmed, reader, *skavering* is only a Danish word signifying to shave off, and this machine is intended to shave off the soil to any given depth by means of rotary cutters, on the plan of a Woodworth plainer, the cutters being scalloped in form of miniature plows, the shares join each other and are firmly riveted together. This machine is being manufactured at Indianapolis, where, the agent informs us, one is now ready to go into the field. He is now canvassing the State for orders, and therefore a notice at this early day may be of use not only to the inventor, but the great public.

The price of a six foot machine is \$1,500, and for eight feet, \$1,700. The whole machine, when loaded with wood and water, is to weigh three tons, to be propelled by one yoke of oxen, (good, for if it fails with steam up hill you can put on a dozen more,) and an eight horse power engine, which is

geared direct to the skavering apparatus which is to revolve some two hundred and fifty times a minute, the earth is to be sliced in curved wedge-shaped sections and reversed with the grass side down. The representation of this part before us is most beautiful, as the lithographer has succeeded to perfection, and not even the tip of these long slices of friable loam are in the least marred, and should the machine follow copy we shall have to take back all that we have said above in regard to the use of steam. The cutting apparatus works like the paddles on a stern wheel steamer, and are supposed to almost run alone after the machine is started; the oxen are used merely for ornament and to guide the machine. The machine is soon to be put on trial at Mattoon, Tuscola (on the farm of E. McCarty), Champaign, and possibly near the village of Chicago. We intend to be present and see the thing move; of course it would be premature and presumptuous in us to attempt an opinion of its value at this early day. We do hope no one will sacrifice his plows or horses, nor purchase the ornamental oxen until we make further report of its actual working. Before closing we will remind our readers that only about two hundred acres of land have as yet been plowed by steam in the United States, and therefore they will have to await the advent of some new machine to come up to the seven hundred and fifty acres in the season, as figured out above. We are ready to be convinced that steam plowing will be the rule, not the exception, but we give due notice that models, plans, lithographs and the like, will never convert us; that nothing short of the plowed facts will have any avail.

Waiter (to party from the country, just seated)—"Here's a bill of fair, sir." Zekiel Green—"Neow, look-a-here! Do you think I'm going to pay any bill o' fare, till we've had suthin to eat?"

Extraordinary agriculture—The man who planted a dagger in his enemy's breast, raised a crop of hemp that elevated him in the world.

THE ILLINOIS FARMER.

BAILHACHE & BAKER.....PUBLISHERS.

M. L. DUNLAP, EDITOR.

SPRINGFIELD, MAY 1861.

Editor's Table.

"The trumpet's voice hath roused the land."

Since our last issue a great change has come over the country—the booming of cannon, the hissing of shot and the gathering of hostile squadrons, have aroused the nation to a fearful pitch of excitement. The plow is being left in the furrow and the yeomen are preparing to defend their country's flag, which traitors have determined to pull down and trample in the dust. Fields may grow up to weeds, the plowshare may rust out and grim-visaged war stalk over the land, the hills and valleys may send back the echo of the loud mouthed cannon and the sharp crack of the deadly rifle, until the last traitor to his country is laid cold and stark upon the battle field, and the stars and stripes again, as of old, float proudly out upon the breeze, for an assurance that our homes are worth contending for. Without the protection of the stars and stripes, without a government to execute the laws and give protection to its people, of what use would be the teeming soil of the matchless prairie; of what value the homes that the sun browned brow of labor have carved out of its ample bounds. The slogan is sounded and freemen will rally for the right.

"A hundred hills will see the brand,
And wave the sign of fire."

We deprecate this stern necessity, this calling upon our rural population to leave the peaceful pursuit of the culture of the soil, for the tented field; but it is one that we cannot disregard. Anarchy, with its fearful and blood stained hand is on the March, and unless we meet it like men our homes will be of but little value. Before this number of the FARMER is mailed, hundreds of our readers will be far away from those they hold most dear, and ready to do battle for the

right. When such men grasp the sword we may rest assured of their valor, with the foe before, their homes and loved ones behind, they will stand a wall of fire to guard our rights. Let us then extend to the families of the absent ones all of kindness and consolation that they may need. Those of us who remain at home should redouble our care and industry; we must of course plant less, but this should be an incentive to better culture and a strict economy in the application of labor. Let us not only work, but think; we should lay our plans with care and execute them with fidelity; we shall soon have heavy taxes to meet, to pay the expenses of this most unholy war, forced upon us by a set of desperadoes, and it therefore stands us in hand that we are prepared to meet it. We must pursue for the time a rigid economy in our expenses; it is now no time to deal in luxuries, when there will be so many who should receive from our hands the necessities of life. We need no apology to our readers for these remarks, for our homes are of no value without a government strong in its protecting arm, and under which courts and juries are respected and where their decisions are enforced.

YIELD OF BERRIES PER ACRE.—A writer in the *Ohio Cultivator* says that two thousand quarts per acre is not an uncommon yield for the first crop of the American Black Cap Raspberry, and that an average yield of three thousand quarts per acre can be obtained by a careful selection of plants and good culture. This, however, does not equal the strawberry crop of a farmer in Northeastern Ohio, whose average product this season, from about thirty varieties, was at the rate of 2,240 quarts per acre, whilst Monroe scarlet, Moyamensing Pine, and Wilson's Albany, gave 5,000 quarts per acre.

We have on several occasions called the attention of our readers to the value of this native fruit. It stands second to none of the small fruits, but should rank with the currant, the gooseberry and the strawberry. Its cheapness and ease of culture should place it in every garden in the State. It is now too late to plant, but not too late to cut them back, so that the fruit will be much larger and the season extended. We are now satisfied that when the canes are strong that cutting back within two feet will answer all the purposes of staking and tying up, which is so expensive. We have to thank Dr. Warder for the suggestion, and have put it in practice on our plants. We are setting out about an acre of plants, which, with those now ready for bearing, will demonstrate the doctor's system of training,

should it succeed as we think it will there will be no further excuse for contending with the birds for an occasional dish from the groves.

EGYPTIAN BLACKBERRIES.—We have a fine plantation of these selected and sent us by G. H. Baker, of Cobden. Some of the canes are nearly an inch in diameter and give promise of a fine crop. They have thus far proved hardy, having stood out two winters without damage. The trailing blackberry, or as it is often called dew berry, also promise well. We hope to be able to report favorably on these plants. The Lawton stood out without protection the past winter unharmed. The demand for this variety has until this season prevented our having any fruiting plants left over.

ONION CULTURE.—The essays from which we made up our chapter on onion culture in our March issue should have been credited to the *American Agriculturalist*, where they first appeared and are now published in pamphlet form and for sale at that establishment. The price of the work is twenty-one cents sent free by mail; it is richly worth the money, as it combines the experience of some dozen of the most prominent and successful growers of that valuable, but in this section too much neglected edible.

HORSE POWERS AND THRESHERS.—The card of Messrs. Wheeler, Melick & Co., of Albany, N. Y., will be found in another part of this number. Their work, both in materials and workmanship, will bear the severest test, and cannot fail to give satisfaction. The senior of this firm is the original inventor of the railway horse powers, which have become so popular throughout the East and in most parts of the West. From several years experience with them we are firm in the opinion that they are the most economical machines used. We would call the especial attention of wheat growers to the value of their IMPROVED THRESHER and WINNOWER. They have several agencies in the State, and it will be seen that they invite others to add to the number. Their commissions are very liberal and terms favorable.

GARNET CHILI POTATO.—We are in receipt of a box of this new and valuable variety from Mr. A. G. Hanford, of Waukesha, Wisconsin, for which he will please accept our thanks for the same. Mr. H. has done a good work for Wisconsin in the introduction of choice potatoes,

trees and plants. He is now a partner in the Columbus, Ohio, nursery, one of the most flourishing institutions of the kind in that State, and from which our Illinois tree planters have, and will continue to draw largely from. Wisconsin will find it difficult to fill his place in her pomological department.

LIGHTNING RODS.—It is again the time of the year when lightning rods will prove useful, and we will jog the elbows of our farmers to the point. E. P. Marsh & Co., of Chicago, furnishes the copper rods, which are said to be much more effective than the common iron ones.

LOST COPY.—Some six pages of copy for the February number of the FARMER came up missing. As there are twenty-two Springfield post offices in as many States of this Union it is probable that it has turned up at some one of them. Among the articles lost was one on Spring Wheat, the New and Old Officers of the State Agricultural Society, and part of the Editor's Table, all of which was a provoking disappointment, for besides losing the seasonable notes we were compelled to make it up in the April number, as part of the copy for the March number had to go into the gap. Should they turn up from that hecatomb of the loved and lost, the dead letter office, they would be out of season.

AMERICAN AGRICULTURIST.—This paper, under the management of Mr. Judd, has reached an unparalleled circulation throughout the nation. This is mainly due to the manner in which it is edited. For convenience it is printed and mailed at New York city, while its several editors reside in the country, and thus send forth practical every day facts, instead of the usual theories gotten up from books in a city office. We have for years been convinced that if we broke loose from "book farming" it would be when our agricultural journals were edited by men who had a practical knowledge of the subject which they attempted to teach. On the general subjects of stock growing and a thousand other points the work is of no small value to the Western reader. The work is a large monthly, three column quarto of thirty-two pages, and furnished at the low price of \$1 per annum. For cheapness and ability it has no superior. It is connected with no mercantile establishment, and down on humbugs of every class. During the past year it has saved its readers thousands of dollars by a timely warning against the numberless confidence speculations gotten up in "Gotham," to swindle the unwary public. May its shadow never be less.

GRAND DETOUR PLOWS.—In another part of the *FARMER* will be found the card of Messrs. Andrews & Bosworth, the manufacturers. This is one of the oldest plow making institutions in the State, and of course have been long and popularly known. We have used their deep tiller for nursery and other purposes for several years, and though owning and trying several others we have found none that do the work of trench plowing so perfect as these. Their shovel plow we think cannot be surpassed. But few of the so-called deep tillers will plow over six inches deep. These, instead of being called deep tillers should be termed clippers or old land plows, and are only adapted to common stubble plowing. A deep tiller or trench plow is of course a different thing, and intended to run in the bottoms of furrows made by another plow, or to plow a deep narrow furrow, say eight to ten inches wide and ten inches to a foot deep. It is therefore nonsense to talk about a common stubble plow being a deep tiller, or a deep tiller a common stubble plow. The two are made essentially different, while a deep tiller will plow six inches deep and do good work, a stubble plow will not run a foot deep and throw out the soil; of course the deep tiller is too narrow for a heavy team to work to advantage in shallow plowing. A common stubble plow is fourteen inches wide, and in running six inches deep turns over eighty four inches, which is good work for an ordinary team. Now run this plow four inches deeper and you will have one hundred and forty inches, and will need two more heavy horses, and the plow is swamped, that is, it will not lift out and turn over the heavy furrow. On the other hand, the deep tiller of A. & B. is calculated to go into the furrow made by a common stubble plow; of course the two teams are required, but the difference is that this bottom furrow is lifted out and thrown on to the other, so as to incorporate the lower strata of soil with the top soil, in the after culture. We will suppose that you wish to use one team: you can then make a furrow ten inches deep and eight inches wide, which makes you eighty inches to move, and you will have the same result as though using two teams and cutting a wider furrow, though with a saving of labor from the fact that these narrow furrow slices are more readily moved and more perfectly pulverized. We therefore take this occasion to say to our readers that when they want a deep tiller with which to stir the soil ten inches to a foot deep, they will do well to order one of this firm, and if they only want a stubble or old land plow they must so designate in their order.

DRAIN TILE.—We see an advertisement in the *Galena Courier*. We want to see them advertised in every paper in the State. They are wanted everywhere on the prairie. Every new house needs them to drain the cellar, the kitchen yard and the garden, to say nothing of the farm. The only wonder is why they have not been made at every large town in the State. Not a village in the State but what would use thousands of them if they were on sale at hand.

DELAWARE GRAPES.—We ordered a dozen of these of J. L. Stelzig & Co., of Columbus, Ohio. When they came to hand we found they had been grafted. Persons wanting grafted vines can send to them, but we wish to be excused. Hear what they say as to the mode of getting up their plants:

“The vines we now offer for sale have been propagated in the open ground—have remained out, even to the feeblest point, all winter, are well grown and finely rooted, and we can claim with the greatest confidence that they are at least equal to any offered in any other quarter, and that they are undoubtedly genuine. We have a large number of one year old vines, chiefly layers of the smaller growth, which we do not intend offering for sale now, but which will make fine plants by the fall.”

No intimation of grafting. Well, when we are convinced that a grafted Delaware vine is worth more than on its own roots, we may give another order to these gentlemen, but until then we shall be pleased to exchange with them and make no charge for this advertising of their goods. When we order woodchuck we don't want rabbit. Two years since we paid six dollars for two plants of this grape; very small, of course, for that price, and they remain so. We admire the fruit of this grape, and consider it second to no other, but we must be allowed to consider it a slow grower under ordinary circumstances, but perhaps we will get the hang of it after awhile. We do not intend anything discourteous to the gentlemen above named, but they will allow us the privilege of putting a less value upon grafted vines than they do. As we wanted the plants for our own grounds and have been at considerable expense in fitting up a border and a six feet high tightly boarded trellis, we did not like to put in the grafted vines, but hope they will come out all right.

SWEET POTATO CULTURIST.—J. W. Tenbrook, of Rockville, Indiana, editor and publisher; 25 cents per mail. All growers of this valuable root should have a copy of this work. It abounds in practical information for sprouting, planting and marketing.

COOK'S NURSERY, CINCINNATI, OHIO.—We have a box of plants from this nursery, and find everything A No. 1. Mr. Cook sends out fine plants; in fact we do not think he has any other to send. We have before taken occasion to mention his system of *cutting back* which gives him such a thrifty growth; we wish to impress this fact upon our nurserymen. We intend to visit this and other similar establishments about Cincinnati in May or June, and hope to discover other valuable hints about trees and vegetables. Send us your bill Mr. C, we can afford to pay for such well grown plants

THE FRUIT PROSPECT.—Mr. C Colby writes us from Cobden that the peach crop is all right thus far. The trees in our grounds at this place have part of them been set four years, and the remainder since. Apples, pears, peaches, apricots and the small fruits, all with the exception of peaches promise an abundant crop, and these a half crop. At this writing, April 22nd, the apricots are nearly out of bloom, and have set their fruit; the peaches are beginning to show their crimson ends, while the apple blossoms are swelling out rapidly. The season is late, but we do not despair of a fine fruit crop, in fact a late season is always auspicious for fruit. Rhubarb for pies has been in order some days.

THE THREE GREAT RACES OF MEN: By Prof. J. B. Turner, of Jacksonville; Bailhache & Baker, Springfield, Ills., Printers. We have only had time to glance through this work as yet, but we shall study it more at our leisure. Without hesitation we pronounce it an able and valuable work on the subject, and one that will interest every class of men. We only regret that our space will not allow of liberal extracts. The work contains 112 pages, and can be had of the author.

DUPAGE CO. NURSERY OF L. ELLSWORTH & Co.—We have a box of plants from the green house of this establishment; they came all right and in fine order. From what we learn, this old and now well known establishment has done a large business this spring, the effect of judicious advertising and the filling of orders with fidelity and promptness. Some of our nurserymen have been disposed to have laws passed to restrict tree pedlars, but the trade is fast settling down to a regular and legitimate business.

SUBSOIL PLOWING.—The more we use the subsoil plow the better we like it. They are made at Moline, by Dure & Co.

MACOUPIN COUNTY FAIR.—We have the premium list for 1861:

J. C. Dawes, President, Carlinville.
Capt. T. C. Davis, Vice President, Carlinville.
T. L. Loomis, Treasurer, Carlinville.
John Tunnell, Recording Secretary, Plainview.
J. S. Otwell, Corresponding Sec., Carlinville.

The Fair will be held at Carlinville on the 17th, 18th, 19th and 20th of September.

Rules and Regulations.—1. None but members of the society will be allowed to compete for premiums.

2. Any person may become a member by paying to the treasurer \$1 for a membership ticket, which will admit a man and wife and two children under eighteen years of age.

3. No entry fee will be charged on articles in the Ladies' Department, except on pork, bacon, cheese and sugar cane syrup, in the Culinary Department, and classes No. 26 and 27 entire.

4. All animals and articles not excepted in the above rule will be charged ten per cent. on the premium contended for.

Bad idea, that ten per cent.; better charge more gate fees and nothing to exhibitors. Throw out the family tickets and stop honest cheating in that direction.

13. No one but officers of the society, Awarding Committees on duty, and those having charge of the stock on exhibition, will be allowed in the ring.

Suppose you muzzle the editors, give them a pencil and note book and let 'em in.

Awarding Committees, after carefully examining each animal or article, shall, without consultation with each other, hand in their choice for first premium to the Superintendent, and if upon examination no choice has been made, the committee may then consult with each other and agree upon their award. The second premium will be awarded in the same way as the first.

Very good, so far, and then call in the exhibitors and hear what they all have to say, one at a time if you please. Don't go it blind—you want born like the Goddess of Justice, with a wet bandage over your eyes; so of course you will have to look around.

No intoxicating liquors, gaming table, or gift concern will be admitted upon the grounds.

Good, we shall try to risk our morality a day with you.

CHESTER CO. HOGS.—We have several parties after us for our heterodoxy on this subject. Wade in gentlemen, we are always open to conviction; we are not dog or hogmatical, but sometimes express our opinion in rather terse Saxon.

MOLE DRAINS.—In our next we intend to discuss this subject at length.

SEWING MACHINES.—The sewing machine has now become a permanent article of household economy in thousands of families, and it should be found in all, and most especially in the West, where there is a scarcity of female help. By turning to the advertising department it will be seen that a great variety are offered for sale and at prices that cannot fail to please. There can be no more acceptable present to wife or daughter than a good sewing machine. If you want your clothes made in time, and well made; if you like to see your children neatly dressed look to it that you get one of these labor-saving and anti seam ripping institutions.

PRINCE & Co.'s MELODEONS.—These instruments have become a national institution and highly prized by all who have the pleasure of hearing them. We have had one for nearly two years, and upon which some half a dozen of the juniors have gone through the training process without damage to its tone. We may therefore safely say that it is at least well made and reasonably durable. One had ought to be satisfied with an instrument that would stand that amount of thumbing. See card.

TO FRUIT DEALERS.—Tree pedlars have no small hand, in the way of fruit pictures, to increase their sales. We have found them valuable in aiding parties to make such a selection of fruit as would suit them, and for that reason would commend their use. We have a book of some one hundred plates got up by E. Darrow & Brother, whose card can be seen in the FARMER, and to whom we would commend parties in want of the paintings. They will be found very faithful copies of the originals.

THE ST. CLAIR NURSERIES.—In the last number the printers located these nurseries at Smithfield, instead of Summerfield, where they belong. We now place them back in their old quarters and hope they will long remain prosperous and useful. Messrs. Babcock & Brother are enterprising men. They have a fine stock of the Nansemond sweet potato plant for sale.

THE HORTICULTURIST, for April, is on our table, and contains a large amount of valuable information. Mr. Mead is making a sensible paper; we have more practical every day talk and less of the intensely ornamental. Our nursery-

men and amateurs should take the colored edition by all means. It is true that it will cost them an additional three dollars, but what is three dollars as an offset for twelve superbly colored plates. C. M. Sexton & Barker, New York, \$2; either the publisher or editor will send forward your subscription, or you can club the two at \$2 50.

Pruning.

The first of May is a good time to prune, just as the trees are coming into leaf; it is too late for the sap to flow and the wounds will heal over. If you cut off large branches put grafting wax, a coating of gum shellac, or white lead in oil, on to the wounded part. The best time for pruning is yet a mooted point; it is probably after the falling of the leaf and before cold weather. We do not prune when there is frost in the tree, or in the spring when the sap will flow, but more or less at other times. In the summer we can hardly be said to prune, for then we *cut back*: that is, shortening the too luxurious branches. In the nursery we aim to prune after the fall of the leaf, and again at their opening, or when the leaf is less than half grown; to prune after the leaf is fully expanded has a tendency to, and does seriously retard the growth. If any one doubts this, let him trim a lot of thrifty young stocks and attempt to bud them three or four days afterwards. Pruning when the wood is frozen will discolor the bark. Old trees need cutting back so that they will send out young and vigorous shoots, for it is these that produce fine fruit; for this reason we are in favor of close planting, and when the trees get too close, shorten them in, and we will have an abundance of new wood upon which to produce a good crop of fine healthy fruit, instead of that before grown on the old rigid fruit spurs and twigs. A severe heading back of all trees that have not made a thrifty growth is of no small value, and we cannot too strongly urge its importance, not only to the fruit grower, but to the nurserymen, and at this time this cutting back should be attended to. Roses and many of our garden

shrubs are not sufficiently pruned and cut back, not only at the time of planting, but afterwards; this gives a strong growth, so necessary to fine flowers. We would recommend to our lady readers a pair of pruning shears, with which to cut back and prune roses, gooseberries, etc. Nurserymen and orchardists, of course, will supply themselves with at least two pair, one to work with one hand and the other to be worked with both hands, and which will take off branches an inch or more in diameter with perfect ease. It is a little too late in the day to run your risk in cutting off large branches with a dull jack-knife or old saw. It is seldom you will need to cut off larger branches than you can with the shears, and of course will seldom need the saw.

[From the Chicago Tribune.]

IMPROVEMENT IN WESTERN BUSINESS—One of the strongest indications that the Northwest is getting fairly over the hard times which have so long prevailed, is the fact that the Messrs. Fairbanks have sold here during nine or ten months past, nearly three times as many large railroad, grain and stock scales, as ever before in the same period of time. This shows a very gratifying improvement in all branches of business, especially those in which much weighing is required to be done. It is conclusive evidence, also, that Fairbanks' scales, which have been steadily growing in public favor for over thirty years, are now, after so long and thorough trial, more highly esteemed than ever before, all through the West. It

[Written for Field Notes.]

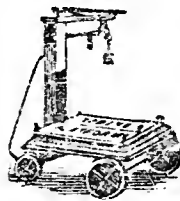
PRUNING ROSES.—*Cut them back. Don't be afraid!* If you have any perpetual Bourbon or Bengal roses, don't be afraid of the knife, but proceed at once to cut them all down to within two buds of the ground. Do the same with any plants of these sorts that you are about planting out. They will make far stronger growth, and flower better during the entire coming season, than if left with all the old wood upon them. Moss roses, prairie and other June blooming roses, should only have the weak wood cut away until after they have done blooming in June, then they should be cut back to about one foot high, and all the wood of two years old and over entirely cut away. F. R. E.

"James, just run and put this bag on the peacock's tail, it's coming on to rain, and the poor dear will get wet, and his beautiful tail will be entirely spoiled."

FOR THE WAR.—Two of our sons, and all of our hands except one have enlisted for the war. If they are accepted we shall be left with one hand, wife, and a lot of small boys, to run the farm, nursery, and edit the FARMER. Our health is now measurably restored—we have taken off our coat and intend to wade in.

BLOOMING OF FRUITS.—Apricots, April 15th; carnation cherry and plum, 23d; June-berry and peach, 25th; pear, common Morello cherry and Siberian crab, 26th; May cherry, 27th; the apple will be out about May 1st. This is on the prairie, in our grounds. Trees under the shelter of the grove are some three or four days in advance of this. Our timber butt: are yet too small to be of any value in the way of protection.

SPECIAL NOTICE.—For terms see prospectus on page 155. All exchanges and communications for the eye of the editor should be directed to ILLINOIS FARMER, Champaign, Ill. Electrotypes and business matters, and subscriptions, to the publishers, Springfield, Ill. Implements and models for examination should be sent to the editor. The editor will, so far as it can be done personally test and examine all new machines and improvements submitted to his inspection. He will be found at home, on his farm, nearly all of the time. So far as it is possible the conductors on the I. C. R. R. will let off passengers at his place, which is directly on the road, three and a half miles south of the Urbana station, now the city of Champaign. tf



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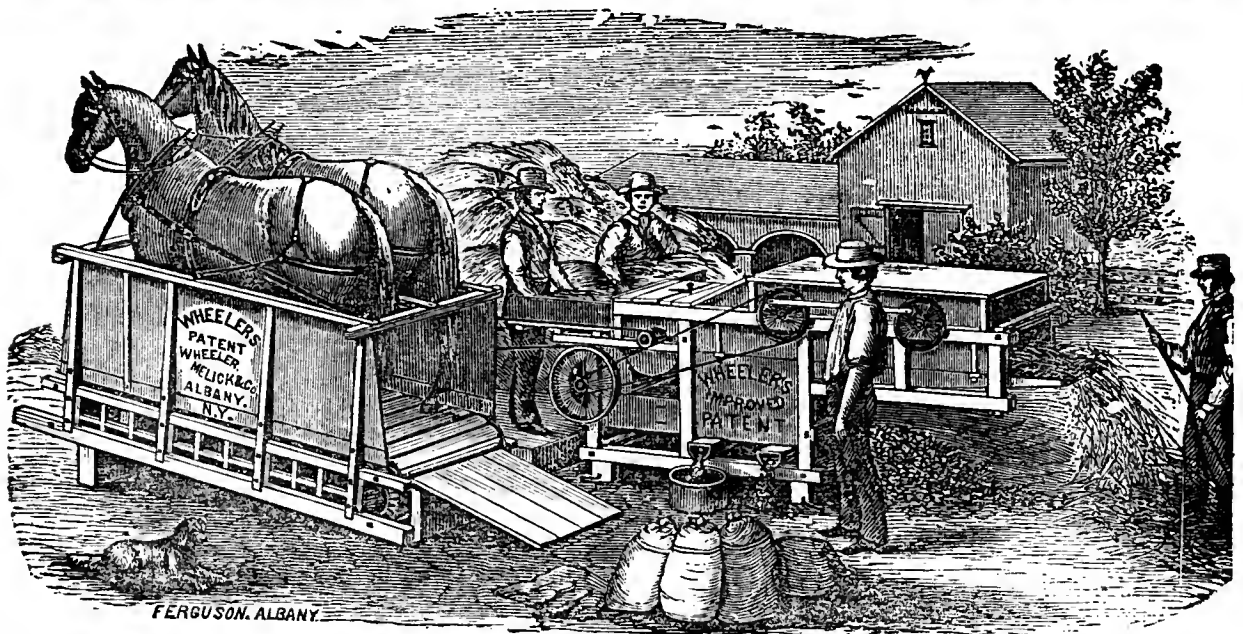
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The elegance, speed, noiselessness and simplicity of the machine; the beauty and strength of the stitch; being *alike on both sides*, impossible to ravel, and leaving *no chain or ridge on the under side*; the economy of thread and adaptability to the thickest or thinnest fabrics, have rendered

THE MOST SUCCESSFUL AND POPULAR
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At my office. I sell at New York prices, and give INSTRUCTIONS FREE OF CHARGE, to enable purchas to sew ordinary seams, hem, fell, quilt, gather, bind and tuck, all on the same machine, and warrant for three years.

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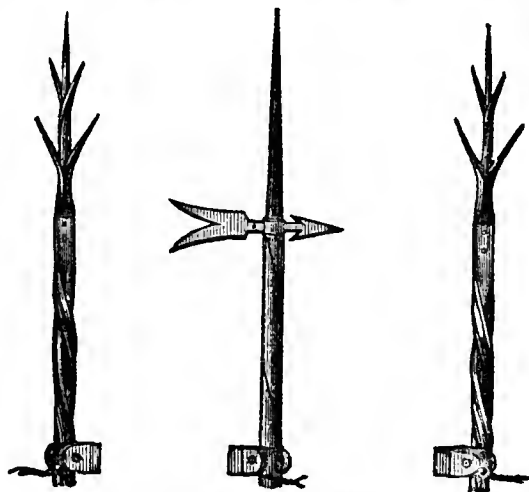
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Hems, Fells, Gathers and Stitches, and fastens its own Seams—thereby saving time and thread.

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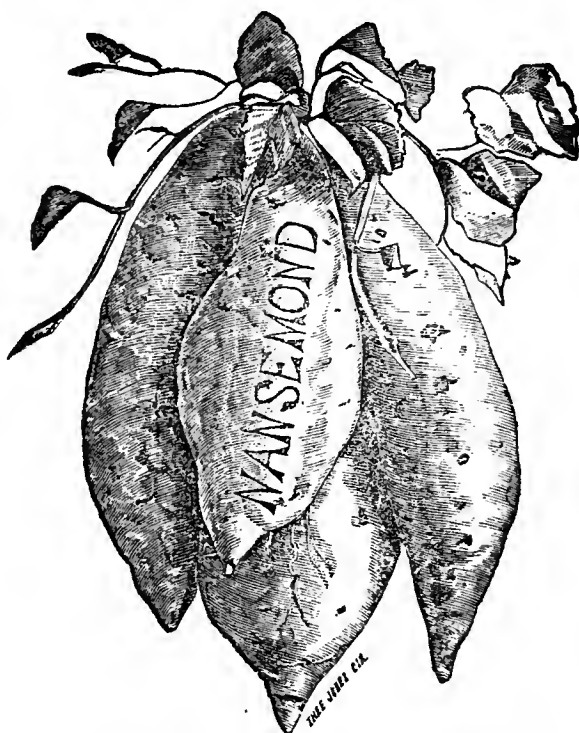
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THE ILLINOIS FARMER.

VOL. VI.

SPRINGFIELD, JUNE 1861.

NO. 6.

June.

June, bright rosy June, has been often eulogized for its wealth of flowers, while to the farmer it occupies an important place in the rolling year. The corn crop now requires the most thorough attention. It is also the month to ensure a good crop of potatoes and of vegetables. The small grains with but few exceptions require little attention this month. June is the great weed killing month, and to this end must our energies be mainly devoted; weeds must be exterminated in the field, in the garden and in the yard, for on the faithful performance of this duty will to a great extent depend the value of your crop. We usually make some headway in May, but the lateness of the season this year will throw most of this work into June. Last year we commenced to work our nursery rows the 25th of April, and all through May a vigorous onslaught was made, and by the middle of May the corn was ready for the plow, but this year we are twenty days behind. It is now the seventh day of the month, and we know of no extensive planting; in fact, but few of our farmers have planted an acre. Some of them are ready, but the ground is so cold and wet that they are waiting for more favorable weather. The breadth of spring wheat, oats and barley has been much curtailed by the untoward weather, and the corn crop will share the same fate; in fact, a large amount of land must lie over for winter wheat; thus we are compelled, whether we will or not, to have a rotation of crops. Perhaps this is all well enough, for thousands of harvest hands are drawn off to the war, some for regular soldiers, some to assist in the minor parts of

the great national drama now being enacted. We can therefore but repeat the advice of last month: to economize labor and to thoroughly work the fields, for all that we can grow will be needed. We cannot expect the large returns and the abundance of fine weather of last season repeated this, but we may reasonably expect better prices for many of our products, especially all kinds of meat must advance in price, and so of the great staples, for large armies must have an abundance of substantial food. Heavy taxes will follow, and we must be prepared to meet them. It is not our province to discuss the merits of the war, but it is our duty to look at the effect that it will have on the industry of the farmer. We are in no danger of being overrun by the enemy, our fields will be safe from hostile tread; we can, therefore, while giving our main energies to the useful, still keep an eye out for the beautiful—shade trees and flowers should not be forgotten, they do much to smooth down the rough, uneven paths of life, and make our ways more pleasant. Give them room and culture.

When you pass by the school house standing out on the sun-lit prairie, just consider how much more pleasant it would be to have a few shade trees; set about it, inside of a nice fence enclosing an acre for play ground. Now is a good time to place the ground in readiness for the setting time; keep them cultivated two or three years and they will then take care of themselves. A few May cherries, a few summer apples, with a double row of peaches next the fence to break the wind will all be in good taste. Who will set the example, and get up a pattern school house yard?

ED. FARMER: The cold blasts of winter have at last been quenched, and the sweet smiles of spring are now upon us. The icy crags have melted away, and the ground is now covered with verdure. Days, weeks, and months have passed, yet no token has returned to quell the ravings of a once firm and united, but now a divided and distracted people. But admitting all this to be true, we must not neglect to cultivate the soil, and make preparations for sustaining ourselves in the future, and furnishing our fellow men with the necessities of life. Agriculture is a great source from which our country has been benefitted. Let the farming class fail to raise crops of medium good quality, and it will be but a short time until it is felt by all persons of every grade and profession. Let the crops fail only for a season, and the mechanic, the merchant, and business man finds a depravity in the times and a general stagnation of trade. The season being favorable, in order to raise good crops it is indispensable that the farmer should be furnished with good teams and agricultural implements in general, so that he may plant the seeds and cultivate the crops as they grow. One important feature might be added here: farmers should not seed more ground than they are able to cultivate in the proper manner. Many crops are materially injured, and very often produce little or nothing, for the want of proper culture. Western farmers long since, and especially of late years, have awakened to the sensibility of these facts. Many who used to boast in the number of acres they had enclosed, have either divided, rented, or sold part of them to others, concluding that a small portion well tilled is better than a large one imperfectly. Would it not be better for the general class of farmers to have a small farm well cultivated, furnished with the necessary buildings, and teem with the luxuries of the season, than to have a large one poorly tilled and in very bad repair?

Yours, AMERICAN.

Ashley, April, 1861.

The above came too late for the May number.
—ED.

ED. FARMER: I have been a constant subscriber to your paper, called the ILLINOIS FARMER, since its first publication; and as its principal object seems to be the spread of useful knowledge amongst its readers, I had thought to give a short sketch of my experiments with the apple tree-borer.

More than three years ago, an apple orchard of eight acres, which had been planted twelve years, came into my possession. It had been so much neglected that the borer had killed many of the trees. On examination I found but two trees in the whole orchard that the borer had not worked in more or less. I then commenced a war of extermination with the knife, a small chisel, and a wire about the size of a knitting needle, and I spent eighteen days close application in cutting out worms from those trees which I thought likely to survive. From some I extracted as many as eighteen or twenty worms from a tree, and when I got through the job the trees looked so mangled that it seemed as though they could never heal over again. The next spring I examined them again and cut out all the worms that had escaped my notice the season before, and at that time a thought originated with me that coal or gas tar was of such strong scent that an application of it to the trunk of the tree might have a tendency to arrest the depredations of the borer. I then went to Jacksonville, purchased two gallons of coal tar at the gas works for twenty cents, and with a painter's brush applied it to each tree from the ground upward, about four inches high, all around the tree. I also at the same time applied the tar to the forks of each tree. As the borer had done much damage in those parts of the trees, I endeavored to drive him from that position also, in which I have succeeded. The same season the rains washed away the dirt more or less from around the trees, and consequently the borer deposited some larva in some of them at the surface of the ground beneath the tar, but in the spring following I cut them out, dug away the dirt two inches in depth around each tree, and again applied the tar thoroughly, then replaced the dirt and tramped it around each tree. Last June I again applied the tar in the same way, and I intend to follow the same process annually hereafter. On or before the middle of June in each year the tar should be applied. As I have driven the enemy to the walls, I am fully satisfied that if a proper application of coal tar is annually made, it will keep the borer at a proper distance, at least from my orchard. There is one thing more that I would mention, that is, that instead of checking the growth of the trees, the gas tar has seemed to have a tendency to facilitate their growth, and as far as that is concerned, I could not wish to have trees grow more thrifty than my trees have for the last three years.

M. J. POND.

Concord, Morgan Co., Ill., April 25, '61.

We have no doubt of the value of the above,

and thank Mr. Pond for giving the details, and should be pleased to hear further from him. Orchards near the groves are very liable to our native borer, of which many of our forest trees, especially in the groves, are much infested. The river belts are not so much infested with them. The price of liberty—that is eternal vigilance—is what it costs to obtain good fruit in all such locations; but as Mr. Pond has demonstrated, even that is found a good investment. Ed.

TREATMENT OF BUDDED TREES, &c.—I have five hundred quinces, budded last summer. When must I cut them off? Are the tops good to plant? What is the right time to bud Mahaleb cherries? I budded last year in the middle of July, and not one grew. I shall be very much pleased to have you, or some of your many readers, tell me in the *Rural*.—E. L. R., April, 1861.

Just about the time the leaves begin to start, cut the old wood away from your budded quince stocks to within three or four inches of the bud. The cuttings are of no value. Rubb off with the fingers all buds that are on the stock, either below or above the bud. These buds must be kept rubbed off as fast as they appear. If, after the buds have made some growth, they seem to require support, tie them to the old stock left above the bud. In August, cut the stock down to the bud, with a neat, sloping cut. It is impossible to set a day for budding any variety of stock, as much depends upon the season. In this subject Mr. Barry gives the following, which will be interesting and valuable, not only to our correspondent, but to others, whose queries on this subject we have before us:

“The time for budding each species, or class of fruits, depends upon its habits of growth. Such as cease to grow early in the season, must be budded early, because it can only be done while the stocks are in a free, growing state, full of sap. Such as grow until late in the autumn, must be budded late, otherwise the new layers of wood, formed after the insertion of the bud, would grow over and destroy it, or the bud would be forced into a premature growth towards autumn, which, in fruit trees, should always be avoided. The common sorts of plum terminate their growth early in the season, and are therefore budded early, whether with plums, peaches, or apricots, at Rochester, usually about the last of July, or beginning of August. The native, or Canada Plum, and the Cherry, or Myrobalan, grow freely till late in the fall, and may be budded in the latter end of August, or beginning of September. Pears on pear stocks are usually budded here in July, in anticipation of the leaf blight, which stops their growth when it attacks them. Where no such thing as this is apprehended, they should not be budded before the middle of August, as the buds are not generally mature till that time. Apples on free stocks, and on the Paradise and Doucin, may be budded as soon as the buds are mature, which is usually, here, about the first to the middle of August. Cherries on free Mazzard stocks, as soon as buds

are ripe, here, about the first of August. Pears on quince, and Cherries on Mahaleb, not before the first of September, and from that to the middle of the month, as the quince and Mahaleb grow late, and especially the latter. Peach stocks should always be budded the same season the seeds are planted, and, as they grow rapidly until very late, are not usually budded till about the middle of September. The budding period varies in different seasons. In a dry, warm season, the young wood matures earlier, and stocks cease to grow sooner, and are therefore budded earlier than in a cool, moist season, that prolongs the growth of the stocks, and retards the maturity of the buds. Stocks growing feebly require to be budded earlier than those growing freely. It is necessary to keep an eye to all these points.”

The above we take from that very excellent paper the *Rural New Yorker*. It is to the point. Both Peaches and Apples can be budded in this climate early in the season, the stock cut back at the time of budding to within four inches of the bud, which will soon start and make a good healthy growth. We often start our apple buds in this way; we have now in our orchard some fine samples of this early budding, done about the first of July. Some of them made a growth of over a foot the first season. In doing this, care should be had not to cut away any of the lower branches, or, as it is called, trimming up the tree, as in that case nothing is gained.

Ed.

Sprouting Onion Seed.

“How is it you raise so large and nice onions?” I asked of an Iowa farmer, as I was sitting at the table with him, and observing some on the table.

“Well,” said he, “we sprout the seed with boiling water, and then plant it early and in good ground.”

“Sprout the seed in boiling water?” I exclaimed, inquiringly. “What do you mean, sir, by that? Won’t boiling water kill the seed?”

“Not at all,” he replied, “but it will sprout them in one minute’s time.”

“It will? It looks incredible!” I replied, with surprise.

“Well, you try it,” he replied grinningly, “when the time comes to plant, and you’ll find it just as I tell you.”

And sure enough, when spring came, and my man was planting his onion seed, and being present, I said:

“Jewell, last winter there was a man told me in Iowa, that to pour boiling water on black onion seed would sprout them in one minute. Suppose you try it?”

“Very well,” said he; and taking the tea

kettle boiling from the stove, he poured the water thus boiling on the seed, which he had in a tea saucer. Looking closely at it for a moment he exclaimed, "My conscience! you have told me rightly. Only look there!"

"I looked, and behold, the little sprouts, about as large as horse hairs, were shooting out of the opened ends of the seed! He did not retain the water on the seed above three seconds, and in less than one half minute after it was poured off the sprouts were projecting from the seeds.

My Iowa friend assured me that this process would advance the growth of the onion from two to three weeks beyond the ordinary method of planting without sprouting."

We have found the above floating around loose through the press, as though it was of value, but we now nail it to the counter as base coin, put in circulation by some ar- rant wag, who is deserving of having his ears cuffed

ED.

FRUIT PROSPECTS.—Never before since our re- collection, in any country we have ever sojourned in, have the prospects of an abundant crop of all kinds of fruit been more flattering than they are now, throughout this portion of Central Illinois. Peaches, cherries, plums, currants, goose- berries, &c. are all out in full bloom, and put- ting on a gala-day attire more beautiful than the robes of Solomon; while apples are coming rapidly forward. Should nothing happen to blast the high hopes which present prospects have raised in the hearts of the people, the fruit crop of Illinois, for 1861, will be as abundant as any that ever blessed the State—*Cass County Union, April 27th.*

THE WHEAT CROP.—The farmers of Egypt have every reason to be satisfied with the ap- pearance of the wheat crop at this time. We have reliable information from many counties in Southern Illinois, giving assurances that during a dozen years past the wheat prospects in the latter part of this month have never appeared so promising as now. The growth is well set, cov- ering the ground—is healthy and strong. That Southern Illinois is well adapted to the growth of wheat as any other section, is no longer a matter of doubt; it matures about four weeks earlier than in the North part of the State, which gives our farmers the advantage of the best prices.—*Mt. Carmel (Wabash Co.) Register.*

We have heard a great deal of twaddle about the growing of wheat in Egypt. The fault, if any, is with the mode of culture, not the soil or climate. Mr. Register, make your farmers plow deep, throw their low grounds in narrow lands, so as to take off the surface water; sow in season, and use the roller, and we shall hear less of grum- bling.

ED.

THE PERFECTED TOMATO.—I wish to make an inquiry in regard to the "Perfected Tomato." Last spring I procured some seed of J. M. Thor- burn. I planted them carefully, and had good success in raising plants, and there can be no doubt that the plants were from the seed so ob- tained; but, strange to say, they produced two distinct kinds of tomato, both different from any that I had ever raised before. Some of the plants produced a very large, smooth, bright red tomato, and others, a tomato identical in color to the "Fejee," but smoother, rounder, thicker, and more fleshy, with fewer seeds than the "Fejee;" both very fine, and so nearly equal in quality that I could not decide which was the best, but preferred the "Fejee" colored, be- cause of its more perfect shape.

Query.—Which of these two is the genuine "Perfected Tomato?"—F. S. J., *Libertyville, Md.*

We have not seen this variety, and are not ac- quainted with its history. If raised from what is called the "Fejee" variety, it is quite likely to inherit a tendency to return to it occasionally. —*Gardener's Monthly.*

We obtained seed of this same tomato from the same source, last spring, and grew from our plants apparently two distinct varieties, one a *bright red*, and the other *deep pink*. We saved seed from both of these, and will try them again the present season. Both were excellent toma- toes.—*Rural New Yorker,*

We saw at Dr. H. C. Johns, Decatur, the "Perfected Tomato," smooth, round and solid. It must prove valuable. We ob- tained seed of Mrs. Johns, and shall give them a thorough trial. The Tomato culti- vated at Jonesboro and Cobden, for the Chi- cago market, is very similar in form, though not as solid. From the habit of the Toma- to we can grow almost any desired form.

ED.

[From the Country Gentleman and Cultivator.]

L. L. Langstroth's Patent Bee-Hive.

EDS. CO. GENT: I wish through your col- umns to make some statements to the bee-keep- ing public respecting my patent hive.

When I applied for this patent, I was not aware that movable comb hives had ever been used, except those with movable bars or the sec- tional frames of Huber. The former required the combs to be cut from their side attachments, while the latter were so costly and demanded so much experience, time and patience to open and close the sections, that notwithstanding they were invented at the close of the last century, they were confined almost exclusively to amateur bee-keepers.

In the first and all the subsequent editions of my work on the Hive and Honey Bee, I have given the plan of the Huber "leaf-hive," and while describing its defects, I never attempted to conceal my obligations to this "Prince of

Apiarians." Speaking of him, I say: "Very early in my apiarian studies, I constructed a hive on the plan of the celebrated Huber; and by verifying some of his most valuable discoveries, became convinced that the prejudices against him were entirely unfounded." And again—"The use of the Huber hive had satisfied me that with proper precautions the combs might be removed without enraging the bees, and that those insects are capable of being tamed to a surprising degree. Without a knowledge of these facts, I should have regarded a hive permitting the removal of the combs as quite too dangerous for practical use."

In the first edition of my work published in 1853, I say: "If Huber had only contrived a plan for suspending his frames, instead of folding them together like the leaves of a book, I believe that the cause of apiarian science would have been fifty years in advance of what it is now."

Now, if I had known that my hive was not so much better than Huber's as to deserve a patent, and if I had been base enough to attempt to palm upon the public substantially his invention as my own, can any man of common sense believe that I would have published to the world just where and how I *stole* my pretended invention? And yet this is substantially what I have been charged with doing.

Since my application for a patent, I have ascertained that prior to my invention other movable frames, beside those of Huber, were in use in Europe. None of them, as far as I can learn after thorough inquiry, are any better than those of Huber. I would refer those who desire information on this point, to the *Cours Pratique D'Apiculture* of M. Hamet, published in Paris in 1859, which contains a larger variety of cuts and descriptions of hives than can be found, I believe, in any other work. All the modifications of the Huber hive are pronounced by Hamet to be useful only for purposes of observation, and he asserts that in the districts of France where bee-keeping is most largely pursued, no movable frame hives here ever come into general use—and that the removal of the frames from the best of them is often more difficult than from the Huber hive. He closes his account of these hives with the significant remark, that "in a moment of enthusiasm he once supposed that such a hive might be cheaply made, but that he had tried it in vain."

Now, compare these results in France, with the extensive use, by the best practical bee-keepers in this country, of the movable comb principle, and the inference will be almost irresistible that they have not yet invented a cheap and practical way of using movable frames.

In the Bee-keeper's Convention in Cleveland last March, an article was read from a recent English publication, in which all hives with movable frames are declared to have no practical value. Of all the movable frame hives now in use on the Continent of Europe, the Berlepsch hives probably the best—for a description of this hive, see *American Bee Journal* for January). It was invented subsequently to mine, and uses essential features covered by my patent, without

which this German hive would have no more practical utility than those which have so signally failed.

Allow me to give an extract, in this connection, from a letter received by me last fall from the Baron Evon Linsingen of Osnaborick, Kingdom of Hanover, dated 10th of August, 1860:

"I feel convinced that no other apiarian has been able to construct a movable comb bee-hive in such an advantageous way as you have done. On the 20th of September, the apiarians from all parts of Germany assemble in Hanover to have a grand consultation about the hive and honey bee, and I wish you to send to my address two of your hives."

The order came too late to be filled in season for the Convention. Were I to attempt to show in what particulars the various patents in this country, using movable frames, have appropriated to a greater or less extent the essential and patented features of my invention, I should require more space than in the largest liberality you would be willing to give, besides opening a personal controversy in which comparatively few of your readers would feel any interest. This much, however, I wish to say, that in my opinion all of them use some of these features, and that without this use they would be of no more practical value than the European hives. I believe that the courts of law will sustain this opinion, and I should long before this have claimed their protection but for my limited pecuniary resources, the state of my health, which has caused the loss of more than half of my time for the last nine years, and the fact that other parties own the greater part of my patent. I have never sought for more than my rights, and if any one can show that before my invention there existed any movable frame hive adapted to practical use, or any invention that used the essential and patented features of mine, I will try to be the first to acknowledge that although an *original* inventor, I was not the *first* inventor of such a hive.

L. L. LANGSTROTH.

Oxford, Butler Co., O.; April 10, 1861.

*Mr. Baldrige is entirely misinformed in supposing that there is no patent on the Harbison hive. It was patented in 1859.

We have said, and again repeat, that these patent hive men have plundered the public long enough. If Mr. Langstroth's patent is genuine and susceptible of defense in our courts, it is time that the point was settled; if it is not, of course the whole family of movable frames must follow suit, and any person can make and use as many as he pleases, and snap his fingers in the face of these harpies. We have for several years heard of the enforcement of the Langstroth patent, but thus far no move is made in that direction. Will it be done, and so put a stop to all this clap-trap? If

the health of Mr. Langstroth is not good, the same cannot be said of those who own nearly all of the interest in the patent. Messrs. owners, have you a patent, or are you prating like others?

Whatever the difference in opinion may be in regard to the value of the Langstroth hive, its introduction has done more to advance the success of bee culture than all other causes of late presented to the public. We do not say there are no other as good hives, for we think there is such; but with the Langstroth hive the subject has been so fully investigated that an immense amount of superstition has been swept away, and we look at facts in their true light. No farmer should do without bees; they are easily taken care of, and will make large returns. They are like poultry, profitable to a limited extent, just suited to the million, but never intended for a monopoly. Ed.

Roses.

Those who have roses now in bloom should cut off all flowers as soon as they begin to fade; by so doing the number of flowers will be increased, and of better size. All plants should have the faded flowers cut off, without they are required for seed. If you want to increase your stock of roses, now is the time to layer them. Commence about the middle of a shoot, and with a sharp knife cut a tongue about two inches long on the upper side, then fasten into the earth with a hooked stick, cover about three inches deep, and by November your layers will have fine large roots, when they may either be taken up and put in the cellar, or covered with earth or straw, where they stand for the next season. Many people, and ladies especially, do not like to cut back their roses, thinking that it will spoil them, and to this is to be charged the poor flowers that many of them have, a severe cutting back giving the plant strength to mature all its flowers, which otherwise would only half open and be of inferior size. *

"Keep Dosin' on Her,"

My neighbor once had a fine cow taken sick. He called the disease "horn distemper"—but whether it was or not I do not know; all diseases which kine have in that section are called by that name. What it really was don't matter. My neighbor, proceeding to extremes at once, bored the cow's horns, and cut off a piece of her tail. The operation on these parts, though undoubtedly having the trouble between them, failed to reach it, and the cow rapidly grew worse. Doses of salts, and oil—doubled and trebled, with such remedies in the way of strong teas and decoctions as the combined ingenuity of the neighborhood (which in such cases is little short of diabolical) suggested, and were poured down the throat of the unfortunate animal, but with no good effect.

As the death of the cow grew more certain, the character of the remedies was more desperate. Croton oil was one of the last resorts, I believe. It was given just before the case came to my knowledge, by overhearing the owner recount the trouble he'd been at, and the remedies he had given, to an old farmer who lived hard by—the cow dying helpless in sight of both.

After listening to the recital with the usual expressions of condolence, the old man sang out, "Well, *keep a dosin' on her!*" and drove away home. After the cow was dead and buried, her owner had the candor to confess that he didn't know whether it was disease or medicine that killed her.

If this was an isolated case, it would not deserve notice; but it is not. I believe it to be one of thousands. In sickness, the anxiety to "do something" leads to administering a flood of medicaments, often sufficient to kill the patient, aside from disease. The general rule, in fact, is, so long as life lasts, to "keep a dosin' on her!"—*Homestead*.

Nothing strange in all this. The M. D.'s treat us just in the same way when we are sick, and thousands are yearly killed with this variety of kindness. Our practice has been the let alone one. If a cow is sick give her a warm place, plenty of water, salt and food, with occasional mashies of bran; so of our horses, warmth and protection from cold winds are the best remedies that we have tried as yet—though for bruises we use arnica in tincture. Give drugs to the dogs, especially if they are worthless curs, and you will find it the most profitable disposition that you can make of them. Ed.

A person who was sent to prison for marrying two wives, excused himself by saying that when he had one, she fought him, but when he got two, they fought each other.

Signs of Rain.

Addressed by Dr. Jenner, 1810, to a young lady who asked him if he thought it would rain to-morrow.

The hollow winds begin to blow,
The clouds look black, the glass is low;
The soot falls down, the spaniels sleep,
And spiders from their cobwebs creep.
Last night the sun went pale to bed,
The moon in halos hid her head;
The boding shepherd heaves a sigh,
For see, a rainbow spans the sky!
The walls are damp, the ditches smell,
Closed is the pink eyed pimpernel;
The squalid toads at dusk were seen,
Slowly crawling o'er the green;
Loud quack the ducks, the peacocks cry,
The distant hills are looking nigh.
Hark! how the chairs and tables crack!
Old Betty's joints are on the rack;
And see yon rooks, how odd their flight,
They imitate the gliding kite,
Or seem precipitate to fall,
As if they felt the piercing ball.
How restless are the snorting swine;
The busy flies disturb the kine;
Low o'er the grass the swallow wings;
The cricket, too, how loud she sings!
'Twill surely rain, I see with sorrow,
Our jaunt must be put off to-morrow.

[From Field Notes.]

Remedy for the Curculio.

We are again at the opening of the fruit setting season, and as the plum trees are showing a profusion of bloom, many persons who have such trees, will be glad to know whether there is any remedy for this great pest, which has so successfully baffled all attempts to prevent his fatal ravages. The most effectual remedy thus far practised, is the jarring process, by which the rascals are made to drop upon a sheet, when they are gathered up and destroyed. But this involves the same expense as is usually charged up against liberty, viz.: eternal vigilance, and only the few who have the virtue of perseverance, win the day.

Next to this is an unsavory drench applied to the tree, either in form of a powder dusted upon the foliage, or in the form of a slush, showered over it. This last has proved in some hands, a full indemnity. One of the editors of the *N. Y. Observer*, who is something of a horticulturist, has for several years set forth the advantages of a drench composed as follows:

To one pound of whale oil soap, add four ounces of sulphur, mix thoroughly and dissolve in twelve gallons of water. Take one half peck of lime, and when well slacked, add four gallons of water, and stir it well together, when settled and clear, pour off the transparent part and add it to the soap and sulphur mixture. To this mixture add four gallons of strong tobacco water. Apply this com-

pound when thus incorporated, with a garden syringe to your plum and other fruit trees, so as to drench all parts of the foliage. If no rain succeeds for three weeks, one application will be sufficient, if washed by rains it should be renewed.

We believe this wash is equally efficacious for shade and ornamental trees, which are troubled with insects or caterpillars.

As many persons in the country will not be able to procure whale oil or other fish oil; and who knows but the new cure-all—coal oil, will; do the business better than either? Somebody try them with a tincture of coal, and tell us how they made out.

We have removed all our bearing plum trees to the hen grounds, that neutral land between the house and barn, in which the hens have free range. The trees will give them shade and protection from hawks and owls, while they will in turn protect the fruit. At the same time we have faith in the above mixture, and hope it will be extensively tried this season. There must be some mode devised to get rid of this Curculio, or in a few years our plums, peaches, cherries, apricots, nectarines, and even apples will become a matter of history. Can some one tell us how many pounds of tobacco stems or leaves will make four gallons of strong tobacco water? ED.

TO PREVENT SKIPPERS IN HAMS.—In a communication to the "*Cotton Planter*," Mr. W. McWillie says: "There is, according to my experience, nothing easier than to avoid the skipper and all worms and bugs that usually infest and destroy bacon. It is simply to keep your smokehouse dark, and the moth that deposits the egg will never enter it. For the past twenty-five years I have attended to this, and never have had my bacon troubled with any insect, I am not aware of other causes for the exemption of my bacon from insects, but simply the fact that my smoke-house is always dark. Before adopting this plan, I had tried many experiments, but always either without success or with injury to the flavor of my bacon, I smoke with green hickory; this is important, as the flavor of bacon is often utterly destroyed by smoking it with improper wood."

The poorer a man is, the more he pays for what he uses. As Franklin very justly observed, necessity never made a good bargain. The smaller the quantity we purchase, the larger the profit is charged for it. How true the poor find this.

A Talk about Plums,

At the Cincinnati Horticultural Society.

Mr. Robert Reilly read the following paper from Wm. F. Irwin, Esq. :

Gentlemen: In responding to your request I will confine myself to a brief statement of the method I have pursued in cultivating plums, rather than attempt a report on plum culture in Hamilton county, as my experience and observation will not warrant me in going further than my own premises.

Seven years since, I planted a spot of ground thirty-five feet wide by eighty feet deep. On the north side it is enclosed by a close board fence, twenty feet high; on the south side with a paling fence of the same height; on the east and west end stands a stable.

In this ground I have planted twenty-five plum trees. About half these have been planted seven years; the others since, and at different times. The varieties are: the Washington, Coe's Golden Drop, Duane's Purple, Dawson, etc.

This enclosure was made chiefly for a chicken yard, and a large number raised in it annually.

Early in the spring I scattered over the ground coal ashes to the depth of two or three inches. The ashes attract the chickens, and by scratching they pulverize it, and by frequent rains it settles and forms rather a hard surface.

For the past four years, or since the trees have become old enough to bear, I have not failed to have fruit, and have never lost a crop by the insect. Outside of this enclosure, and about fifty yards distant, I have a plum tree which has always borne, but from which I have never gathered a ripe plum, being uniformly destroyed by the curculio. What the merits of this method are, I leave you to discuss. It may be the situation of the ground and its protection by the enclosure. It may be wholly attributed to the presence of so many chickens, and possibly (and I think quite probable) that the coal ashes possess valuable properties, or it may be attributed to the combination of all.

Respectfully,

WM. F. IRWIN.

Avondale, March 22, 1861.

Dr. Warder said he was glad to hear from our old friend Mr. Irwin. He had no doubt the coal ashes, and the chickens working in them, and packing the ashes hard, thus prevented the insect from obtaining a lodgement. If the insect was possessed of the instinct attributed to it, that prevented its depositing on limbs hanging over water. Chickens were known to refuse to eat the curculio, a fact here stated by Mr. Brace, a careful observer. He did not, however, want to lose sight of his old remedy of limewater and sulphur.

Mr. John P. Foote said it appeared to him that Mr. Longworth established the fact some years since that a solid pavement would prevent the ravages of the insect. We know that Mr. Bush succeeded with chickens, and Mr. Irwin practiced both remedies.

Mr. Stoms said, since he made his report on

the curculio he had received such suggestions from persons who had made careful observations, as induced him to regard with attention the idea that disturbing, by shaking the trees was the most effectual method for destroying the insect.

Mr. McWilliams throws water over the trees every day, and shakes them; never fails to raise plums.

Mr. Reilly mentioned two instances—as going against the chicken theory—of plums being cultivated in poultry yards, with no fruit, while close by and outside the poultry yard very nice plums were grown.

Mr. John K. Green stated that he had planted plum trees in the chicken yard, and never got a plum; the soil, however, was an open, sandy one, in which the insect might easily obtain a lodgement. He intended trying hogs this year, to let them run in his plum orchard.

Dr. George F. Foote stated that he had raised plum trees in the State of New York, obtaining fine plums. He cut off the limbs of his trees, and struck them with a mallet.

Mr. Reilly called attention to the fact that in Mr. Bush's plum orchard there were five hundred chickens.

Mr. B. F. Sanford was convinced it was the agitating system that saved the plums. Mr. Bush had a small yard and a great many chickens. The chickens disturbed the trees.

Mr. Stoms remarked to the same effect, and a general opinion seemed to prevail that the remedy against curculio was the disturbing element—commotion in the trees.

THE SEASON.—Notwithstanding several severe frosts, the fruit in this region of country is as yet uninjured, and promises an abundant crop. The peach blossoms are unusually abundant. The farmers are in good spirits. The ground "breaks up" finely, and a good share of the corn crop is already in.—*Jacksonville Journal*, May 2d.

We will bet a good apple that the corn growers of old Morgan will have their planting done on time. They never fail of a crop; the word is not in their vocabulary; it is true they sometimes get a light crop, say thirty to forty bushels to the acre, though in good seasons they run up to eighty or a hundred bushels. We doubt if there is a county in the State that uniformly turns out as large an average yield per acre as old Morgan. The soil, the climate, and the superior culture make up the trio of powers that produce this result. A visit to the corn fields of Morgan when June sends up the green blades, and when the soft south-west wind kisses the ripening wheat, is worth making the effort.

[from the Country Gentleman and Cultivator.]

GRAFTING PEACH TREES.—Your reply to your correspondent, R. K., of Nashville, Ills., though doubtless correct in regard to your climate, may lead him into an error. Grafting the peach succeeds admirably here, scarcely more than five per cent., under favorable circumstances, failing to "take." We make use of the splice-grafting mode, having the stock and scion of about the same size, and plant out in nursery rows at once, leaving two buds of the scion above the surface of the ground, and one below. The operation is performed during the winter or very early in the spring. Make a smooth cut, see that the bark of the stock and that of the scion perfectly coincide (on one side, at least) and tie firmly with bass matting. If the grafts cannot be planted at once, they must be healed in, or buried in moist sand in a cellar. Whether this mode will succeed in Illinois, or not, I cannot say; but it would be well for R. K. to try it next year. We commence budding here in June.

Vinely, (near Midway) S. C.

D. H. J.

TYING GRAPES—The best and cheapest material to tie grapevines to stakes or trellises, is basket willow; and small tough willow twig will do. Every vineyard should have its willow patch; it is then always handy, can be used at any time, makes a strong ligature, which, when dry, can only be loosened by cutting with a knife. It costs little or nothing, merely the setting out of the willow; is better than twine, bass matting, or any other substance, and the labor is performed in less time, for when a vine is once seized with the willow it cannot slip out of one's reach, as is the case with other materials used for tying, which often causes much annoyance. Some persons are prejudiced against willow ties, saying that no one but a German can use them. As this is contrary to the commonly received opinion, that "a Yankee can do anything if he tries," I recommend to grape growers who have not tried it to do so. My opinion is that in future they will use nothing else.

Mortonville, N. Y.

W. A. W.

FRUIT TREES IN THE VICINITY OF BARN-YARDS.—It would be well, says the *Saratoga Farmer*, if farmers would surround their barn-yards and pig pens with fruit trees. Such trees bear abundantly, and heavy crops of plums can often be obtained in such places, as the stung fruit is sure to be picked up and devoured as soon as it falls, thus preventing the increase of the curculio. Apples, pears, cherries, and all other fruits, do well for the same reason, and they are also provided with a plentiful supply of liquid manure from the drainage of the barn-yard.

THE WHEAT CROPS.—The wheat crop was never more flattering in this section than at present. The warm and frequent rains this spring caused it to grow luxuriantly. Many large fields are now waving with an abundant crop of this valuable grain, and if the rust or some other cause does not blast the crop, we will surely have wheat in abundance in Southern Illinois.—*Greenville Advocate*.

GARGET IN COWS.—The cure is, a tablespoonful of saltpetre, given once a day. Three or four doses have always effected a cure.—*Journal of Agriculture*.

LAMPAS IN COLTS.—Wash the mouth with a weak solution of alum, and the lampas never will trouble colts.—*Ibid*.

Off for Illinois!

M. L. Sullivan, our fellow townsman, so well known and respected as one of the most enterprising citizens of Ohio, has just been in the office of *Field Notes* and given us the parting hand! and that crossing of palms brought the mist into the eyes of two rough old men who seldom indulge in sentimentalities—that is—the stalwart old farm king of the Scioto and the unpolished editor of *Field Notes*, who has shared his friendship ever since our residence at the capital. For the last five or six years Mr. Sullivan has been opening lands in Illinois, and dividing his time between that and his estates in this region, where his family have still remained. But now he thinks the time has come for him to transplant his homestead, from the Scioto to the prairies, and Ohio loses a citizen which she can ill afford to spare, as well as a family which has occupied a large place in the affections and esteem of our people. No wonder it is hard to say good bye, in such a case.

Lucas Sullivan, the father of the several families bearing his name, came to this place from Kentucky, in 1797, as a surveyor, locating land warrants in the Virginia Military District, west of the Scioto. The old town of Franklinton, opposite this city, was laid out in August, 1707, where Mr. S. settled with his newly wedded wife in 1801. This region was then in the county of Ross, with the county seat and territorial capital at Chillicothe, nearly sixty miles to the south of us. The present city of Columbus was not laid out until 1812. M. L. Sullivan, the eldest son of the family, was born at the old homestead in Franklinton, which place he has occupied ever since; the other brothers having long since taken up their abodes on this side of the Scioto, in Columbus. An active life of nearly sixty years has not quenched the light of his noble eye or chilled the pulses of his great and generous heart. May the sunset of his life be as peaceful as the glorious autumnal days of his prairie home—Good-bye!—*Field Notes*.

Mr. Sullivan is one of the largest owners of wild land in our State. In this county (Champaign) he has over twenty thousand acres in a body. Several thousand acres of this he has been putting under culture during the past half dozen years. His son, J. M. Sullivan, having charge of the improvements. With pleasure we welcome Mr. S. to our State, for, though to some extent a speculator in our wild lands, yet he has done

much to develop the resources of the broad acres that he owns. His farm improvements in various parts of the State are extensive and so far as we know judicious, and we have every reason to believe that the farm management in this county has been efficient, and on the whole as profitable as of any class of farmers. We have no great faith in these overgrown farms, but of this our readers may rest assured that under the charge of the Messrs. Sullivants, father and son, it will be made profitable if the thing is possible.

ED.

Draining.

In our last we promised to pay some attention to draining, and we now proceed to the task.

TILE DRAINING.

This is the mode now the most universal, and of practical application, under any and all circumstances, and will in the majority of cases supersede all other modes. In draining, the first essential is a place to discharge the water; it is useless to talk of draining without this can be accomplished; the water must have a free outlet or the drains will soon become clogged and useless. The main drain must be either an open ditch, or sufficiently large to carry off the accumulations from the side drains. A covered drain will carry off a larger amount of water than an open one of the same size, as the sides become more smooth, and therefore present less resistance. The sides of an open ditch is always more or less abraded by the action of frost, and the bottom becomes clogged with the falling earth. Not so of a covered drain, the sides of which are not acted upon by frost, and if the bottom is of gradual descent, however small, the bottom presents a smooth, unobstructed passage to the water, hence is capable of more efficient service. Therefore, in making an estimate for the discharge of water this should be taken into the account. A nar-

row slough runs through our farm near the centre, in which there is an open ditch a mile long; before this ditch was cut the water, in time of heavy rain, was nearly a foot deep over its surface, presenting a respectable stream. At the point where the road crosses we put in a culvert two by four feet, but this was of little use in time of floods, and much of the roadway which served as a dam to force the water through the culvert was carried away; but since the cutting of the ditch it has been ample, and the big slough is at all times, save when clogged by "tumble weeds," kept within its banks, and this ditch is only two feet deep, three at the top and one at the bottom, but it so thoroughly drains the slough between the times of heavy rains, that the spongy soil takes up an immense amount of water, which is given off as the flood recedes. We have, therefore, come to the conclusion that fewer open drains are needed than is generally supposed. We have no doubt that a six or seven inch sole tile would discharge all the water except, perhaps, in times of extraordinary rains, the excess of which would do little or no damage, and in a day or two be all right. We have a serious objection to open drains; they take up the land without any corresponding benefit as against covered drains, and the annual expense of keeping them clear is no small item, besides, the side drains running into them are liable to be clogged up by the earth washing in from the plowed land. As a general thing our soil is not very impervious, and a drain will dry it for a long distance, and therefore we shall need a much less number of drains to the acre. In fact we think there is little land that will need over forty rods of drain to the acre, and if we put the cost of this at forty cents the rod, which is a liberal estimate for main and lateral drains with tile, we have a cost of sixteen dollars the acre. Now we would ask if there is one tract of land in twenty that would not pay a large interest in the way of increased crops on land thus treated?

Would it not be better for any farmer who intends to purchase a farm to purchase enough less to save the money to drain what he does purchase; he will have less fencing, less plowing, less land to travel over, while his crops will be more certain—pay him a better per centage on his labors and capital. For the orchardist we look upon draining as almost absolutely essential; of course, fair crops are and will continue to be grown in favorable locations, but this will not do for the million who need and should have an abundance of good fruit. The peculiar nature of the prairie soil is such that it is readily saturated with water in its upper stratas, and therefore needs free outlets to carry it off through or over the soil. When this is accomplished its depth and friability is at once secured, and trees and plants make a healthy and vigorous growth, but if this water is left in the soil to evaporate, it has a damaging effect upon the roots of both trees and plants.

The drawback to tile draining has been the want of tile. Hundreds of our farmers would have given this mode of draining a thorough trial, but for this defect. This difficulty will not long be in the way, as we are assured that plenty of the common sizes will be made in Chicago the present season, and when their manufacture is once established in Chicago the business will soon extene to every part of the State where there is suitable clay. As we propose to discuss different modes of draining we do not wish the reader to lose sight of one great fact, that while other modes are only applicable under certain circumstances, that tile is a sure thing under any and all circumstances.

THE MOLE DRAIN.

The history of mole draining reaches back to the early working of the English Feins, nearly a hundred years, and may be said to have given birth to the idea of burnt tile, which in all heavy, tenacious clays, have

become the only article considered of value in such soils.

Within the last ten years the mole drain has been re-invested with more or less of popular value. The Messrs. Marquiss, of Piatt county, Illinois, were the first to bring it into note and test its practical value. Since then a large number of parties have taken out patents for improvements, not only on the form of the mole, but to regulate its depth and other devices to add to its value. From the fact that tile had superceded the use of the mole in England, and from partial failures we have imbibed a prejudice against it at the outset, but time has proved that its use to a certain extent in certain localities is of real value. We have before said in a previous number that its use in Southern Illinois was of little or no value; and, from further enquiry, we are satisfied that in all of the *lime mud drift* it is of no value. The northern line of this drift is near the T. H. & Alton Railroad. Northern Illinois presents a great variety of soils, and consequently the mole drain has widely varied in its value. The soil of Central Illinois is more constant in its character and generally consists of a heavy clay loam, which is permeable to moisture by innumerable veins and pores, and it is in such soils that the mole is of the greatest value. Of their permanency we can as yet say but little, as the oldest drains are not over seven or eight years old, yet all of these continue in good repair, and for aught that can be seen to the contrary, will yet last a long time. In the absence of tile they have proved of no small value in furnishing water for stock. A mole run for a mile or two along the bed of a slough has seldom if ever failed to produce an abundant supply of water the year round.

The main drains are made with a large mole, and the lateral ones with a smaller one. Most of our sloughs branch off fan-shaped, and in these fans or branches a small mole will answer.

FIGURE 1*

Shows how these small water courses radiate; *a* is the outlet, which must be an open drain or stream into which the water can be discharged on a level with the mole drain, so that no back-water will occur. *b* shows the large mole or drain, and *c* the small ones or laterals.

FIG. 2.*

a, mole; *b*, cutter, the lower part of which is closed by the ear h forced up by the mole; *c*, the arable land; *d*, wet land; *ee*, strata of clay that holds the water.

In FIG. 2 we have a representation of the upland depressions and showing how they are drained. On every farm these are more or less numerous, and in the time of heavy rains, and for some time after, are so wet that they are not tillable. By taking off the water through the mole these are at once ready for working.

We had a main drain made of some one hundred rods, and some three to six rods distant from the open ditch before mentioned, and a lateral one of some fifty rods running through a depression of the upland, in the corn field, for some days the lower end of the drain could not discharge all the water pressing into it, and the land for forty or fifty rods at the lower end was not drained at all until the water began to subside, when it was quickly drained. This mole now discharges nearly twice as much water as the open ditch a mile in length, being over twice the distance, and heading in a large pond. We are now satisfied that we have as long a drain as we need to do efficient work and to fully drain the slough at its lateral branches we shall run up several main drains from the outlet as shown in FIG. 1. We think one great error committed in mole draining has been in making the drains too long, in such cases draining only the upper portion of the land. To remedy this we would recommend that no drains be over two hundred rods in length; if more length is needed better begin back to the outlet and run up another parallel drain so as to give

ample room for the water to pass out freely. The number of these will depend upon the amount of water and the fall of the slough. Another error of no small magnitude has been the shallow moles. Ours are three and a half feet deep, and we would not consent to have them any shallower. These were made by the old machine used for several years by Mr. Marquiss, of Piatt. He says that shallow drains, as a general thing, are worthless, and that no drain should be less than three feet. The reason of this is plain, as the soil, becoming arreated in these shallow drains, it soon crumbles down and fills up the mole. To use these moles the ground must at the time be completely saturated with water, and it is useless to try to use the machine where the land is dry, for in that case none but an imperfect shallow drain can be made. In making tile drain great care is always exercised in having the bottom of a gradual descent, as a depression of a few inches will allow sediment to fill in and continually fill up the drain. This may be the work of years, but one that is sure in its results; but in the use of these moles little attention has been paid to this very important point. It is true that several machines have been constructed to raise and lower the mole at pleasure, but, practically, we do not think they have accomplished much. We need a better engineering skill in this direction, and careful levels taken before we begin the work; in no other way can we avoid this difficulty. In one of our upland drains, through a depression, as shown in FIG. 2, is a depression of over a foot, which will in time ruin the drain above that point. On the machine used there was no apparatus for raising or lowering of the mole, consequently so soon as the soft mud like soil of the basin was reached the machine buried itself nearly a foot deep, making the drain at this point over four feet deep. Though the Messrs. Marquiss were the first to set the ball in motion, yet they have not availed themselves of the new improvements, and their machine is almost

* The engraving illustrating these figures were not received in time for publication in this number; they will appear in our next.

a model of the old English machines. We would recommend that the several owners of patents meet together, and out of the mass of improvements select the most valuable and hold a joint interest therein. The principle of the mole drain is not patentable, as it is old, but there are certain improvements in the machines that doubtless are, and which are valuable. As there is no subject at this time in regard to the culture of the soil of more interest than that of draining, we would solicit the views of all. Because a person is the owner of a mole draining patent we shall not restrict him in consequence, but will be glad to hear from all interested in the subject.

Sorghum.

ED. FARMER: Will you please call the attention of the farmers of Illinois to the importance of planting largely of Sorghum, or Chinese sugar cane? I see nothing said upon this subject in the public journals, and have not heard a farmer speak of it this spring, consequently fear that the Northern people are losing sight of one of their greatest interests. I think it is highly important that we should live as independent of the South as possible.

Yours, etc.,

P. C. MOSIER.

Homer, Ills., May 18, 1861.

—Our correspondent is not well posted in regard to the Sorghum. A large amount was grown last season, and double the amount has been planted this, and the planting is still progressing; mills and pans are being ordered, and but few neighborhoods but that will have its Sorghum mill, and thousands of barrels of the sirup will of course be made. In planting, the seed should be soaked in warm water, to swell, as the husk of the seed is so hard that it will lie a long time in the ground before it comes up, unless the weather is warm and wet. Some soak the seed for twenty-four hours, put it in a bag and bury it in dry soil, or where the water will not stand on it; in this way the seed will soon sprout, and not being water-soaked the soil will not dry the seed; but it is much surer to come up well. Sorghum does best on the mulatto soils, or those of light color. It should be planted and worked like broom corn, in drills, the suckers taken off, or when thus treated it will sucker but little, as

the suckers do not come to maturity. Of pans, we have formed a high opinion of those made of cast iron; they are cheap and easily managed. Of the manufacture we shall speak hereafter. Sorghum has now become one of the staples of the country, and interested parties have nearly ceased their efforts to speculate further with it. Its culture and manufacture are simple, and had it not been for some of our learned quacks, with their nostrums, it would have been thoroughly established years ago. But thanks to the common sense of the rural population they have solved the problem that science vainly endeavored to grasp, or perhaps, more properly speaking, quack science, and such quacks as Mr. Wey, of Imphee farm. As the shadows of such men will never grow less, we can stand aside and let them shadow on, and darken their own pathway, not ours

Ed.

Chicago Wild Cat Sliding Scale.

The representatives of the different railroad and transportation companies whose lines terminate in Chicago met in convention a few days ago and adopted the following resolution and the accompanying sliding scale for Illinois bank notes:

Resolved, That the notes of the Banks of the State of Illinois shall be received by the Railroads and Transportation Companies represented in this meeting, upon the conditions and rates recited in the following resolution:

LIST No. 1. PAR.

B'k of America, Chicago,	Exchange Bank,
B'k of Northern Illinois,	Kane County Bank,
Chicago Bank,	Marine Bank,

LIST NO. 2. NINETY CENTS.

Alton Bank,	Mt. Lean County Bank,
American Bank,	Mechanics' Bank,
B'k of America, Mt. Carmel,	Merchants' Bank,
Bank of Bloomington	Pittsfield Bank,
Bank of Indemnity,	Reapers' Bank,
Cumberland Co. Bank,	Union Bank,
E. I. Tinkham & Co's B'k,	Mahawee Bank,
Highland Bank,	International Bank,

LIST NO. 3. EIGHTY CENTS.

Bank of Brooklyn,	Ill. State Security Bank,
Bank of Commerce,	Illinois Central Bank,
Bank of Illinois,	Lake Michigan Bank,
Bank of Jackson County,	Ohio River Bank,
Bank of Sparta,	Paine Bank,
Bond County Bank,	Patriotic Bank,
Columbian Bank,	State Stock Bank,
City Bank of Ottawa,	U. S. Stock Bank,
Fulton Bank,	Wheat Growers' Bank,
Illinois River Bank,	

LIST No. 4. SEVENTY CENTS.

Bank of Galena,	Fraclin Bank,
Bank of Geneseo,	Kankakee Bank,
Bull Head Bank,	Marshall Co. Bank,
Central Bank,	Topion Bank,
Eagle Bank,	Olympic Bank,

LIST No. 5. SIXTY CENTS.

Agricultural Bank,	Commercial Bank,
Alisana Bank,	Kaskaskia Bank,
Bank of Aledo,	Western Bank of Illinois,
Bank of Metropolis,	Warren Co. Bank,
Bank of Elgin,	

LIST No. 6. FIFTY CENTS.

Bank of Benton,	Jersey County Bank,
Bank of Ashland,	Lancaster Bank,
Bank of Naperville,	Lafayette Bank,
Douglas Bank,	Narragansett Bank,
Garden State Bank,	Plowman's Bank,
Hampden Bank,	Red's Bank,
Humboldt Bank,	Rock Island Bank,

Hints for the Season.

SWEET POTATOES.

Finish planting as early in the month as you can. Plants are now plenty and cheap, and no farmer should neglect to plant this vegetable. Remember that the Nansemond is the only variety that is of any value here-away.

THE GARDEN.

Look well to the garden this month, and not only keep the beds clear of weeds, but stir up the surface with a steel rake. The morning is the best time for this work. A steel rake vigorously applied is a wonderful fertilizer in the garden, especially if kept bright; it then tickles the sides of mother earth so that the plants fairly laugh. Well, let them laugh, they will be all the tenderer for it, and three times as genial; so tickle away while the sun is licking up the dew. Besides this, we have found a poisonous property to weeds in this same steel rake; we cannot say whether it is forged in on purpose, or merely accidental, but it is there at all events, and where we stir the surface to break the thin crust that keeps the air out of the soil the little weeds that are just poking themselves out are certainly killed.

THE CORN CROP.

Keep on working the corn if there is no weeds, stir the soil and let in the air. Remember, the finer the surface is made the better the crop. As much of the corn was planted late, it will need all the more attention. We have often thought that a roller made to run between the rows to crush the lumps would be a fine thing, this to be followed with a harrow or cultivator to loosen up the soil would certainly be valuable.

STRAWBERRIES.

We do nothing more with our strawberry beds than to take off the fruit as it ripens, until the fruiting season is over; we then with a sharp, clean spade, spade up one-half of the beds in alternate strips of a foot in width; these spaded strips are raked smooth

and the weeds taken out from among the strips of plants. The young plants will fill up the spaded spaces ready for the next year's crops, when the old plants are in turn spaded under. This is the cheapest and best mode to manage the strawberry in garden culture, and will give you an abundance of excellent fruit.

SWEET CORN AND CABBAGE.

A patch of evergreen sweet corn should be planted about the middle of this month, to give you late roasting ears and for drying. But few of our farmers have half enough green corn. Its use has been tabooed by some of our would-be scientific men as redolent of summer complaint, but its daily use from August to November, a period of three months, will be found healthful, and produce no bad effect if fully matured and well cooked. It is one of our summer staples and winter luxuries. Give it a thorough trial, and you will be a convert to its value.

The first of this month is a good time for late cabbage. Remember, the ground must be rich and finely pulverized and kept thoroughly cultivated; twice a week the cultivator should pass through the cabbage rows. Don't have any fears of having too much cabbage, it is good to cook in various ways, good for krout, good to sell, and remarkably good for your cows, so you will be safe in having a good supply of it.

POTATOES.

In a former number we gave such full directions in regard to this great staple, that we need not repeat any part of it here.

TURNIPS.

Though turnips are not a sure crop on the prairie, yet as they always do remarkably well we often sow more or less of them. A rather moist soil suits them best; plow the land deep by trenching or subsoiling, harrow fine, sow and roll. They should be weeded out with a scuffle hoe, as with it the plants can be thinned and weeds killed. Some drill them, but of late years we have sown broad-

cast about the 25th of this month to as late as July 10th; in this latter case we deeply plowed wheat stubble.

LIMA BEANS.

The culture of Lima beans is supposed to be attended with difficulties of no ordinary character among which is a lot of smooth, nice poles, some eight feet high, giving them the appearance of a hop yard, but this is not necessary. No doubt that the Lima will do best on a pole some five feet high, but it will do well without any at all, as we have proved. We plant in hills three by four feet, and give them good culture, but no poles, and we get a good yield. Of course it is too late to plant, but not too late to try this plan.

NEWLY PLANTED TREES.

If the wind sways over your trees, either stake them up or place a mound of earth around them; we would prefer staking and a good mulching. Thousands of newly planted trees are lost this month for the want of a little care. While on this subject we would say, look out for worms and caterpillars, destroy their nests as fast as they appear.

THE LOCUSTS.—We learn that there is every prospect that our country will be visited this season by the seventeen year locusts, swarms of which are now making their way through the earth. They may be expected to appear in full force in three or four weeks, when our farmers may look out for music and mischief. We are rather sceptical about these locusts appearing but once in seventeen years, for we seem to remember that many of them were seen but five or six years ago, and great damage was then done to the twigs and young trees.—*Ex.*

DEATH OF COL. FRED. KENNETT.—We have received the sad intelligence that Col. Fred. Kennett, of Selma, died at his residence about 12 o'clock Sunday night. Mr. Kennett has long been a prominent politician in this State, and was universally esteemed for his many generous and noble traits of character. His remains have been brought to the city.—*St. Louis Democrat*, 21st.

An Interesting Letter from Oregon.

PORTLAND, OREGON, March 8, 1861.

M. L. Dunlap, Ed. Ills. Farmer: I have often thought I would write you, and give you some notices of this country, its varied productions, present condition and future prospects; subjects in which you may feel an interest. But other matters have monopolized my time, and even now I feel that from haste I shall be unable to do these interests justice in a hurried letter.

* * * * *

Oregon is an interesting country; it would look to you as it does to me, that it was made after the balance of the world was completed, with a great deal of stock on hand. We have high mountains and plenty of them—more volcanic peaks—beautiful valleys—vast numbers of hills—beautiful streams and an ocean at our door. The first impression in getting into the *livable* part of Oregon, (a new word, but quite significant,) is that the country is small, because the valleys, look which way you will, when on a slight eminence, appear as if surrounded by mountains. But when going south, the valleys spread out, you find prairies, gentle eminences, hills all cultivated, when you soon begin to think there is land enough here to give homes to two or three hundred thousand people.

This country is a very productive one. The inequalities of surface give a variety of soils—but they are all good—some better and some best. Everything *you attempt* to raise can be grown here with very great success, except corn and sweet potatoes. Corn is produced at the rate of thirty and forty bushels an acre, sometimes even sixty, but these are rare cases. We don't have that kind of weather, of summer nights, that you have, when it is said sheets are a burthen, and which I used to be told was necessary to make corn. But wheat—why God has made this a wheat country, and the prospect seems to be that the volcanic hills will produce heavy crops of it, year after year, for a long time to come. The farmers are becoming great admirers of June wheat. You will ask what this is? Well, they sow large fields of wheat in June, it comes up and grows on till fall and through winter, covers the ground with a heavy crop of blades which are fed down in winter by stock, and then this wheat makes great crops. Wheat thus sown is worth as much for feed as the crop is when harvested. And then again, the farmers commence sowing wheat after the rains in the fall, and continue plowing and sowing all winter, and in spring until April, which makes a good crop the same

season. Oats produce heavy crops here, and many times oats are made from volunteer crops. I give it as my firm conviction that with proper cultivation, crops are surer here than in any part of the world of which I have knowledge. Still, farming is miserably done here. Stock will live and thrive with little care; sheep cost very little attention—and we have a class of people—some, not all—that don't like to work over much.

There is no better dairy country in the world, cows plenty, and yet butter of eatable quality cannot be had at less than thirty five and forty cents per pound, and not enough at that. But you can see our prices current.

In the fruit line this is a great country. Apple trees set out two years bear well, and they are in their prime at six years. They are cultivated as dwarfs, the central shoot cut out. I suppose the dry and hot weather in summer makes the growing wood form fruit buds. The little trees are loaded with fruits in the season; and often you will see every limb and twig staked up to prevent them from breaking, and sometimes, when the limbs admit, they lay on the ground loaded with fruit. The same facts may be stated in regard to the bearing of cherries, plums and pears. You know nothing about the perfection of these fruits in Illinois. We have no trouble here to grow all these fruit trees.—Plant out the trees on proper soil—and nearly all soils are proper—trim the trees, and the thing is done. You don't have to wash your tree with lie—you don't have to scrape them—you are not troubled with worms, bugs, or those infamous little rascals, the curculio. Lord! Dunlap, if you were here with your orchard, you would think, so far as fruit growing is concerned, that you were in Paradise before the fall. Peaches are good—nice, but not the best; apricots ditto, nectarines ditto; all these grow here, and we luxuriated upon them the last season.

Of small fruits, they all grow here in abundance—gooseberries, currants, all of various kinds. We have a native raspberry here which I think you would like. I don't believe it was ever carried over the mountains. I have cut stalks of it large enough to make stout canes, say an inch and a half through the butt. The canes grow about six feet high, stout, and branch. The berry is large, seeds small, and with the native flavor, which I like. I must send some of the seeds to you. These raspberry canes are very productive. A dozen shoots, allowing half dozen canes to grow, will furnish fruit for a family—and they continue in bearing several weeks.

Now, here I am near the close of my sheet, and

have not begun to write on subjects marked out by myself.

Oregon is in straits now. She paid out six millions of property, at current prices, for the Indian war. It took so much from a people that had nothing really to spare; just about as much as 216 millions would be from your State. Do you think Illinois could stand such a drain of its capital? Oregon has had to do this. She had more cause to denounce the government, a hundred million fold, than the secessionists of the South; yet Oregon has stood up under this—bally enough, to be sure—and she is now recovering from the dreadful wrongs inflicted upon her by government. So much for the present condition of Oregon.

Our future prospects are good. We are opening gold mines on our frontiers, employing miners from California and that class of people here, our farmers are attending to their farms, we are gradually building factories to work up our wool, and we offer to eastern emigrants for their future homes a healthful country, a fertile soil, a benign climate (potatoes and dahlias have been in the ground all winter), and a hearty welcome.

Please let me hear from you. Mrs. F. sends her respects to you, with kind recollections.

I am yours, as ever,

S. FRANCIS.

— It is with pleasure that we lay before our readers the above, from Mr. Francis, our predecessor in the chair editorial, and now editor of the *Oregon Farmer*, of which we have had occasion to speak on several occasions. It will be seen that the letter is dated March 8th; it came to hand the 15th of May, and after the June number was made up, which will account for its late appearance in this number, though we shall send it to the printer, and if the forms are not all made up to crowd out some less valuable matter and give it a place at once. Mr. F. writes us that his wife, like most women, don't like the country, but that she is growing daily more and more at home. The country is new, and of course everything is in a transition state, but with the natural resources of the country, its fine climate and teeming soil it will be but a few years before Oregon will put on some of the finish and airs of the older States. The Indian wars have been, as stated, a serious draw back on the progress of the State, but had it not been for our southern embroglio, no doubt but that Congress would at the last session have paid off these claims and sent the new State on her way rejoicing. We

have always had a love for Oregon; long years ago, when in the northern wilds of New York, by the blaze of a log fire, we read the travels of Lewis and Clark, and later, those of Capt. Bonneville and Col. Fremont, have not in the least abated the desire to see that interesting country, its towering mountains, its hills of basalt and wide spreading valleys, subdued to the use of man. But our lot is cast, and we never expect to leave our home on the great prairie slopes of Central Illinois. We have acted our part in pioneer life, and our ambition is fully gratified in that respect. On the subject of wheat culture we have a hint that may be of use even here, and that is the seeding in June and pasturing the crop. Last year we sowed ten acres of rye early in August, for feed, and through the fall fed it down close. It is now, at this writing, one of the best of crops, and the heads in bloom May 16th. We shall sow this season in July for the same purpose. Will some of our farmers give winter wheat a trial; just for once step out of the old beaten path. The early fruiting of the apple, Mr. F. says the trees are treated as dwarfs, by low heads and cutting out the centre or leading shoot; we have no doubt that early bearing is hastened in this way. That slip shod farmers should be found in Oregon is no wonder, for among the early pioneers hundreds of them left the frontiers of the Western States—a sort of cross between the hunter, loafer and farmer, with strong proclivities to bad whisky, coupled with an antipathy to work. Their emigration was a godsend to us, and we hope that in time, they, or at least their children, will yet make good citizens.

ED.

Corn Planting.

The lateness of the season for preparing of the large corn fields admonish us that we must husband every possible resource. Late planting is never desirable, as it always includes more or less of risk in the maturing of the crop. To avoid this, is our present object. The common practice in planting, is to plant in hills about four feet apart each way, so as to allow of the working both ways. This, with common cultivator, shovel and small plow, is the most convenient, but in a late season like this let us see how it works: Farmer B. has forty acres to put in, having but a small farm, he keeps but a single span

of horses; he commences to plow, say April 25th, and will make about two acres a day; on the 25th of May he will be through plowing; he then has a week of harrowing and working off before he is ready to plant, which brings him to the 1st of June, and by about the 5th of June his corn will be planted—nearly all at the same time—and he must then lay by until it is large enough to work. It will thus be seen that he must plant less or have his corn in very late; but some may ask why he does not stop to plant a part before it is so late. This is not economy, for in planting rows both ways the whole field should be first plowed, though it can be done piecemeal, but not to an advantage of the work. If corn can be planted in the freshly plowed ground, we all know that it is much the best, it will come up better, get the start of the weeds, require less labor to tend it, and finally produce a better crop. If this is the case it is certainly an object to plant as fast as we plow, if not at the same time, at least very soon after. Our present mode of putting in corn is a very good one, but as the price goes down its production must be cheapened, so as to leave a profit to the farmer. If the present plan is good, we shall from this cause be compelled to seek a better. The plow must, and will soon be placed on wheels or drums to relieve it of friction; in the case of plowing for corn, the drum that relieves the plow of friction can be used as a roller, to roll the ground as plowed and to cover the seed. Thus we will plow, plant and roll at the same time. With an implement properly constituted, one hand and three horses will plow, plant and roll at least three acres in a day. Of course, it will not, nor should it be planted in hills four feet apart, but in drills with rows three and a half feet apart, and the grains one or two in a place, as shall be determined by practice. When the furrow is first turned up, and yet moist, the lumps are easily crushed; let them lay a day or two in the sun, and if they can be crushed at all they will require a greater force, and as it is the complete pulverization

of the soil makes good crops, it follows that it is economy to crush these lumps at once. We hope our plow makers will look to this, and now that the plow itself is about perfect, that they mount it in such a way that half of the power is not lost in friction.

NEW CULTIVATORS.

It should not be forgotten that at our last State Fair that near a dozen different patterns of wheat cultivators were for the first time on exhibition. All of these were for two instead of one horse, as in the old plan, and several of them constructed with a view to have the driver ride on them. We hear little from these inventors, but we must not from that infer that they have been idle, for we doubt not every one of them is doing the best he can to supply the demand in their own neighborhoods. We know it to be a fact that several of them are making large numbers, but the demand is so much in advance of what they can turn out that they have had no occasion to advertise or in any way attract attention; we have letters advising us of this fact. Instead of a dozen, as at the State Fair, we are safe in saying that there are at this time at least twenty different patterns of these two-horse cultivators now being made. Of course these will be more or less valuable, but not one of those at Jacksonville but is far in advance of the shovel plow and common cultivator. The first premium was awarded to the one that we think will need an extensive improvement to bring it up to its less noted contemporaries. Now, as all of these implements are intended to work the corn but one way, that is, in drills, it will be seen that we are to have a change in the system of corn culture.

THE NEW MODE.

We will now return to farmer B. and his forty acres, and see what he will do with the drill system. He has the common plow, harrow, planter and roller; he plows a land the length of his field, say four acres, he harrows it one way ready for planting, he

takes his "Brow's" or other corn planter, ties strips of red flannel on the wheels of the planter, sixteen to eighteen inches apart, and adjusts the planter to two kennels of seed, works the planter whenever the red comes opposite the lever, and the result is his corn is drilled in, he goes over it with the roller and proceeds as before. In this way he begins to plant the first of May, and though he does not finish any the sooner than before indicated, yet he has but little of the late planted; besides this, when he is done planting his first corn is ready to work; it has start of the weeds; and our word for it, it will not require more labor to keep the field free of weeds thus planted, than it would to let the field lie until all is plowed, so as to check-row it, thus giving the weeds a week the start of the corn. Now, if he can obtain by purchase or loan, one of the two-horse cultivators, he will make rapid work with his forty acres, which, with the late season and customary course it is impossible for him to get ready and plant even out of season.—The great breadth of corn last season was due to the long, dry favorable spring to prepare the land, while this spring we have in contrast, a short, unfavorable one, reducing the crop at least one-half. In view of the large number of laborers that will be drawn off by the war, it behooves every farmer to look well to this subject, for our expenses are like to be large, and it is of no small importance that this State should make at least a fine average crop of this great staple. Our present large stock will soon melt away, and we must bend our energies to recruit the supply. At the next State Fair we shall see a large array of two-horse cultivators, when it will be time to discuss their relative merits, but at present we can but use such of them as we can get hold of, without hoping to get the best. Before this reaches the reader we expect to have one in operation among the small trees in the nursery. It is also arranged for a corn planter, and next season we hope some of our shops will turn out

our *beau ideal* of what a plow should be, with its attendant apparatus. The prairies of the West demand these implements, and we must and will have them.

The above was written for the May number, but crowded out; though out of season, we place it on record as containing some suggestions for consideration.

[For the Country Gentleman and Cultivator.]

Patents on Bee-Hives.

In the *Country Gent* of May 9th, J. W., after referring to patents which have been granted on hives using movable frames, says—"If these are infringements," (meaning upon Langstroth's patent,) "why were patents granted for these hives?"

J. W. does not seem to be aware that patents are constantly issuing which use the patented features of previous inventors. If an application contains any patentable feature, the Patent Office cannot reject it, even if it uses what has been patented to other parties—provided that the claim is confined to what is original with the applicant. For the office to reject any such invention on the ground that it uses the patented features of other inventors, would be illegal, even if they know that the applicant intends to defraud those inventors by neglecting to procure a proper license from them.

To make this plain:—Suppose that A. patents an invention, and that B. makes an improvement which the office regards as new and valuable—then a patent must issue to B., even although he must use the patented features of A.'s invention to introduce his own. If B. neglects to procure a license from A., it is not the business of the office to protect A., who must seek his remedy in the courts of law.

The case stands thus:—A. can always use his own invention, without let or hindrance from any one; but he cannot use it as improved by B. without permission from B.—while B. cannot legally use his own improvement without the previous consent of A.

Now if B. is a dishonest man, he may sell his patent to parties who are ignorant that they cannot use it without a license from A.; but he can convey to them no rights which he did not himself possess.

If B. believes that his invention does not use any feature which is, or of right ought to have been patented to A., he may honestly use and sell it without a license from A. In this case the only appeal is to the courts appointed to decide such questions. L. L. LANGSTROTH, *Oxford, Ohio.*

In the above our farmers will find some useful hints, applicable to other as well as to bee-hives. Our people have been cheated about enough to put them on their guard against run out patents and improvements.

The truth is, patent swindling has been a rich placer, and most thoroughly worked.

ED.

CASH MONEY.—This sounds musical after enduring all sorts of paper money for the past twenty years; in this State we are at last to have a specie standard in all transactions. We are now done singing the old song of Pope—

"Blest paper credit,
Last and best supply,
It lends corruption
Higher wings to fly;
A leaf from thee
Shall waft an army o'er,
Or ship off Senates
To some distant shore."

Good-bye to the trash—fifty, sixty or seventy cents are no longer a dollar. We advise farmers to demand the solid, it will do to sleep on. A large number of our friends have grown so nervous with "stump-tail" that the physicians have had to prescribe soothing opiates, but the most marked effect was produced on a collapsed patient by placing in his naked palm a gold dollar; since that he has sold off his "stumptail," and is rapidly improving. We have a small pile salted down to show our grand children. We now have the felicity to know that a dollar is worth ten dimes, or one hundred cents.

ACTION OF THE BOARD OF TRADE OF CHICAGO.—

WHEREAS, The recent events in the commercial affairs of Chicago have culminated in a return to a standard of gold and silver; therefore

Resolved, That in the opinion of the Board of Trade of Chicago, all sales of property and daily quotations thereof should hereafter be made in funds equal to specie.

From the Chicago Tribune.

FAIRBANKS' SCALES.—It is a significant fact, which the public will appreciate, that whenever new scales are put upon the market, as large numbers have been from time to time, during the last thirty years, it seems to be the first chief aim of the maker to show that they are the same as Fairbanks', or like them, or are improvements upon them, thus recognizing the latter as the standard for excellence, and showing the strong hold they have upon the public confidence. It is a well known fact that while most of these scales have, after more or less trial, passed mainly out of use, Fairbanks' have gone steadily forward, increasing in public favor year after year, and are now much more generally used than all others, not only in this country, but wherever American commerce has been carried. This could not be so if they were not all that is claimed for them in respect to their durability, as well as convenience and accuracy.

THE ILLINOIS FARMER.

BAILHACHE & BAKER.....PUBLISHERS.

M. L. DUNLAP, EDITOR.

SPRINGFIELD, JUNE 1861.

Editor's Table.

Five months of the year 1861 have fled, not on angels wings, but amid the clash and din of hasty preparation for grim visaged war. The booming of cannon has been borne on its wings, as the days sped on, and its echo is still reverberating through the present, nor will the old notes cease until drowned out by a mightier din, the combined baying of columbiads and huge mortars, to which the Minie are but the faint yelpings of a lady's poodle. Giant armies are wheeling into line, but as yet have scarcely let loose the dogs of war; another month, and the wailing of widows and the plaintive cry of the orphan may be heard—business ruined and thousands of families accustomed to all the comforts of a luxurious soil and sunny clime, driven from their homes and sent out penniless into the wide world to battle for their daily bread. Four hundred thousand despots who would lord it over the fair heritage of free labor and crush out the happy homes of the sons of toil have betrayed their country and turned it into one vast military camp. We can but hope that the contest will be short, followed by speedy punishment to the traitors. Let them not continue to breathe the free air of our country, but drive them out or give them to their own buzzards.

While the government and our soldiers are protecting our institutions and making free homes worth living for, it becomes us as cultivators of the soil, to see to it that the great staples of life shall be produced in abundance, to feed those who are called to defend the country. So far as we can learn our farmers have never exercised a more judicious management than during the past season, not only in their outlay, but in their disposition to pay off old debts, and thus place themselves in an attitude of independence. One

great difficulty with many families in the country is to imitate some city relative or friend supposed to be rich, but whose title deeds and claims to the same are locked up in the vault of some banker, labeled, "hypothecated." Could we lay bare this mushroom gentry we would do our industrious sons and daughters a vast deal of good, for they would then take warning. In these times, especially, it is not in good taste for the wife or daughter of the farmer or mechanic to indulge in fine dresses; shilling calico, and other light but inexpressive goods are more in accordance with their duty both to themselves and their country. Where this contest will end, or what may be its results, cannot be seen in the teeming future; we can but do our duty and take the chances of what may lay before us. Let us waste no time in idleness, nor squander our hard earned money on baubles. Now is the time for active, intelligent toil, the time to prepare for reverses, should they come, or to enjoy the blessings of peace, should such a happy event soon occur. We have long since given up the idea of a speedy yielding up of the traitors, they have too complete possession of the Southern mind, and all their eloquence and powers will be used to continue the contest; their resources of the munitions of war are ample for a vigorous defense; they will therefore hold out until they carry their fellow citizens with them in one wide spread ruin. It is their aim, if fall they must, to be considered as enemies of war rather than as traitors to their country. We cannot, therefore, hold out to our farmers, the prospect of a speedy close to the present state of things. Agricultural staples must advance, especially meats of all kinds and wheat. Corn, and the grosser products of the farm will probably continue about the same as at present. All cotton goods, rice, and sugar, must rise in the scale of prices, so of hardware, as the immense draft of this material for war purposes will stimulate the production, and whether the guns, shells and shot are used, it matters but little, thousands of tons will be made, employing a large army of mechanics who will be drawn off from the production of useful goods. It is with no pleasure that we contemplate this state of things. A lover of the beautiful in nature and art, we can but look upon this mad fratricidal war as a deep marring of our picture. We prefer to see belts of waving forest verdure and lines of hedges, to glittering bayonets and emblazoned banners—waving corn and piles of golden grain, to the swaying of hostile squadrons or mounds of deadly shells—the sound of the merry "yo, heave," of the sailor, the go

along of the driver, to the shoulder arms of the infantry, or the graceful riding of the armed cavalry—a peaceful home embowered amid waving leaves and flowering vines to a camp full of the pomp and circumstance of glorious war.

SCOTCH HYBRID RHUBARB.—As this variety has been largely disseminated we again take occasion to say that we consider it of little value compared to Myott's Victoria or Linnæus. We have used none of the Scotch as yet, as it is too small, while stalks of the Victoria are two feet long in rows along side. We would like to sell our stock of this variety, at the cost of digging and shipping to some one who appreciates it. Its friends say it will not run to seed; in this they commit a small error, as we have demonstrated.

FOR THE WAR.—In our last we intimated that there was a prospect of having to attend to our work nearly alone; but the "Rifles," to which the members of our family are attached, have not yet been accepted, but are still held subject to any call.

FROST OF MAY 1ST.—The frost was severe, freezing ice nearly or quite half an inch thick; the wind was from the northwest, with a dry atmosphere, consequently the damage was much less than it would otherwise be. Apricots were then set, and are badly thinned out. All other fruits appear to have escaped with impunity.

PEORIA PLOWS.—We have one of Toby & Anderson's Premium No. 6 plows, for old land. It is a most excellent plow, runs light, pulverizes the soil and covers the stubble to perfection. The land side arrangement is decidedly valuable, the handle in which the beam is framed being cut out just below, and a bent iron substituted, rendering clogging out of the question. To say that we have no better stubble plow on the farm is saying a great deal, when we inform the reader that we have both the "Moline" and "Grand Detour." We have seen a large number of these plows on sale, and must say that the quality and workmanship of the wooding is very superior. The Peoria plows have long been an institution on the Military Reserve, and of late have spread over a wide district, just about the size of the Northwest and adjacent country, California included. The only suggestion that we have to make is that they should entirely ignore the use of any but cast steel in their mold boards, com-

mon Pittsburg steel was well enough in its day, but that day is past, and it is now the day of cast steel.

LAND DRAINING: By J. H. Klippart. This is a work of near five hundred pages, containing one hundred illustrations, and published by Robert Clark & Co., No. 55 West Fourth street, Cincinnati, Ohio. We have given this work a pretty thorough perusal, and must say that we are highly pleased with it. We can confidently recommend it to our farmers, garden and nurserymen, to whom it cannot fail of proving valuable. The work is eminently practical, and well adapted to the soils of the West. Tile makers will find full directions in regard to tile making, which will be of use to them under almost any circumstances. No nurseryman, gardener or farmer can afford to do without the work; certainly no man having unimproved land worth twenty dollars an acre should attempt its improvement without its aid. The price is \$1 25 by mail. Messrs. Clark & Co. have all the valuable agricultural and horticultural works for sale at reasonable rates. A price list will be sent on application.

A NEW MOTIVE POWER.—A subscriber writes us that he is engaged in getting up a perpetual motion, that will not only run itself, but propel a lathe, fanning mill, paint mill, pump or similar work, and wishes to know if it will prove a paying institution. Most certainly it will, so soon as you get the running gear all right. It will be a nice thing to rock the baby, more especially twins, on account of the balance. Go ahead, Mr. Subscriber, you are on the road to wealth and fame. The thing will be in demand by the million. Our coal mines are nearly exhausted, and steam is growing old; in fact, some of the engine that pass our door draw awful consumptive breaths, and others puff and pant with old age. Your invention is just in time to save the world's progress, and give it another impulse from the fire of genius.

LAST WEDNESDAY night, May 1st, our vicinity was visited with one of the most severe frosts of the season. Ice was formed in many places half an inch in thickness. At the time, all the fruit trees were in full bloom, yet strange to say, not injured a particle. It is attributable to the fact that the dry and windy weather had exhausted all the damp and moisture, and consequently were not injured. We hope this is the case all around.—*Gazette, Champaign.*

THE OREGON FARMER.—This is a valuable semi-monthly, published at Portland, Oregon. It proves that Oregon is not an exception to all newly settled countries in the way of wants and trials, to those carving out new homes. It appears that one of the most pressing wants is material for farmers' wives, as thousands of bachelor farmers have their own housekeeping to do. It must be funny to see them making their own butter, frying slap-jacks, washing dishes, and sewing on buttons, with nary bright eye to smile on them. Alas! poor unfortunate bachelor farmers of far off Oregon, without the pale of woman's smiles—no wonder that you complain of hard times and the want of society. Will not some benevolent person send out a ship load of industrious young ladies to cheer up the desponding spirits of our distant cis-Rocky Mountain farming friends. A young lady at our elbow says she is ready to go in the van of this daring enterprise, and will take up arms where valor leads, and love will follow.

FROST AND FRUIT.—Up to Thursday morning of last week there never was a fairer prospect for fruit, of all kinds, than we were enjoying in this locality, but in one night the destroyer came—the freeze of Wednesday night made the bloom on the trees bite the dust; and to-day it is doubted if there is any evidence left that this fair prospect had an existence. In regard to the matter we have made many enquiries, of many different persons, and the answers were as varied as the enquiries were frequent. With one the crop was destroyed entirely; with another, the destruction was partial; another, that his apples were not injured, but that all other kinds were destroyed. So it goes. While we believe that the prospect for fruit, generally, is injured, and may be in some localities entirely destroyed, and that every man may be honest in his convictions in regard thereto, we believe that there will be apples and cherries in sufficiency for home use, if not hereafter destroyed. The peach and pear we believe to be wholly destroyed; of the berries we have no knowledge. Let us be satisfied, whatever the result may be.—*Ledger, Attica, Ind., May 9th.*

We hope the above is the worst side of the picture. The vicinity of Attica is one of the best for fruit, though they have been unfortunate in the peach crop for several years.

COMMERCE OF CHICAGO.—We have received, through the politeness of Messrs. Hammill & Reynolds, commission merchants, No. 161 Kinzie street, Chicago, the third annual statement of the trade and commerce of Chicago, for the year ending 1860, reported by the Board of Trade of that city. It contains one hundred and

four pages of closely printed matter, and gives ample evidence of the industry of the Secretary, Mr. Seth Catlin. The capacity of the grain warehouses is set down at 5,475,000 bushels storage; can receive and ship 675,000 bushels a day, and ship alone 1,835,000 bushels.

For the first seven months, that is to August 1st, there was received of wheat 2,360,728 bushels of the crop of 1859, and for the next five months to January 1st, 1861, of the crop of 1860, 12,066,364 bushels. The crop of 1859 is estimated at 8,955,667 bushels, as received at Chicago, showing that it was vastly below that of the crop of 1860. On the whole it is a highly interesting document, as showing the prosperity of the country. Copies can be had of members of the Board of Trade, or of the Secretary. We shall have occasion for the use of these valuable tables from time to time.

VALEDICTORY.—With but a brief interval of absence, I have been connected with the *Prairie Farmer* since the fall of 1855. With the present issue my connection with it ceases. Circumstances over which I have no control compel this step. It is neither necessary nor my duty to explain those circumstances. It is proper, however, to say that my relations to the readers of the *Prairie Farmer* have been simply those of an editor, not publisher, as some have supposed. I have had no pecuniary interest in the paper.

This step is unpremeditated, and as unexpected by me as by the reader. I trust, however, this change will not necessarily affect any public interest with which I am or have been identified, and in connection with which I am or have been identified, and in connection with which I have been entered into obligations of hospitality. I have no doubt such obligations will be discharged cheerfully by Chicago without my presence or effort.

It is due the publishers of this paper to say that my relations to them have been of the most satisfactory and cordial character.

I must say further that no one could have labored more zealously, or used their means more liberally and self-sacrificingly, than they have to make the *Prairie Farmer* worthy of the confidence of Western agriculturists. They deserve success; and the continued effort of the friends of the paper should be given to sustain it.

It is not a pleasant duty to say farewell. I have no words to express my thanks for the acts of courtesy and words of kindness I have received from the friends of the paper. I can only pledge my grateful remembrance. I go with a clear conscience. I have labored to discharge my duty to the best of my ability. Whatever errors I may have committed have not been wilful errors. I have no doubt the charity which covereth a multitude of sins has been properly exercised to cover them. I trust so.

With the best wishes for the prosperity and happiness of the readers of the *Prairie Farmer*,

and with firm faith and hope that the agricultural promise of the Northwest will be fully realized, I have only to write—farewell.

CHAS. D. BRAGDON.

In parting with Mr. Bragdon, it sunders relations which have existed for over three years with uninterrupted harmony, and leaving, he carries with him the best wishes of his former associate. Mr. Bragdon will ever be found at his post, and true to any trust reposed on him—a man of unswerving rectitude in principle and practice.

EMERY & Co.

— We have for the past year had premonitions that the West would lose the vigorous pen and indomitable industry of our cotemporary, but we had hopes that it might not prove true. The field that Mr. B. will occupy, though less useful to the public, yet we trust will be more satisfactory to himself. His bodily strength could not long bear up against such draughts as he has been making upon it, without more out-door exercise. He leaves the editorial chair with the regret of his readers, who have been largely benefited by his efforts. Wherever his lot may hereafter be cast he will have the good wishes and sympathies of a large circle of friends, and in leaving the West he may be assured that thousands of homes where he has held his weekly sociables through the *Farmer* will feel his absence.

THE HORTICULTURIST FOR MAY, is on our table, in which we have a picture of the Union Village grape. The ourculio is occupying no small space in the present and back numbers of this work. These articles alone are worth to fruit growers more than the subscription price, \$2, to which add a half dollar and we will send you that and the FARMER a year. The colored edition is sent for \$5, or forty-two cents a number.

CORN CULTURE.—We are now in the midst of corn culture. Corn should be worked to keep down the weeds while small. Some ridge up their corn by throwing a furrow on the hills, but we think this all wrong; level culture, with cultivator or double shovel plow is the best, to our notion.—After the large bracing roots come out it is time to lay it by.

THE GARDENER'S MONTHLY continues as valuable as ever, it is full of good things, and only costs a dollar. Send to publishers of the *Gardener's Monthly*, box 406, Philadelphia, or you can club it with the FARMER at \$1 75.

W. W. CORBETT.—This gentleman, for several years connected with the *Prairie Farmer*, is to take the place of C. D. Bragdon, the former editor. We have been personally acquainted with C. for several years, and know him to be a gentleman in every sense of the word; he is a ready writer, energetic and cautious. We welcome him to the tripod, and have no fears that he will falter at his post.

REAPERS VS. HEADERS.—The Messrs. A. & J. Haines have personally laid upon our table their pamphlet for the current harvest. They claim large advantages in heading over reaping. They now recommend the cutting of the straw some two feet long, to enable it to cure, as it has been found that the heads do not cure well and have a strong tendency to mold.

“It is acknowledged that wheat cut and put up in this way has spoiled; but in every case the stacks were badly put up and not secured, or the straw was cut entirely too short; yet in every case or nearly so, the parties thus violating orders and instructions as given in our bills, claimed that they had strictly obeyed instructions, until cross-examined on the subject. We suppose that one main cause of so much carelessness on the part of a few that use our machine, arises from the fact that many who use it successfully, express full confidence in saving grain under any circumstances, without fully or particularly stating the necessity of cutting the straw a proper length.

When straw is cut too short, it will pack much closer than if cut longer, because the weight of wheat is too great for the small amount of straw to resist, and consequently excluding the necessary amount of circulating air, causing must and injury, also abusing the users, manufacturers and the reputation of this mode of harvesting generally. Also such neglect on the part of the users give the myriads of reaper agents an opportunity of speaking evil of this mode of harvesting.”

As many of our readers use the headers we would impress this point on them, to cut the straw long and see that the ricks are well aired by poles through the centre. This mode of harvesting requires no small amount of care, as well as when cut by the common reaper.

PREMIUM LIST OF THE STATE AGRICULTURAL SOCIETY.—This list came too late for a notice in our May issue. It is out in good season, much in advance of any of its predecessors. The society offer \$20,000 in cash premiums, and citizens of Chicago \$20,000, special premiums. The list can be had of the Corresponding Secretary, J. P. Reynolds, Springfield, Ills. Every farmer and mechanic should have a copy, and carefully

look over the list and see if there is not something that he can compete for. Farmers should encourage their boys to get up something to take to the FAIR; it will do them good in various ways, even if they do not win the first premium, it will stimulate them in the future; they are to be the farmers of the next generation, and it is time that they begin to fit themselves to fill with credit the position that they will soon occupy. Fathers are too apt to overlook this important point, and treat their sons as though they were always to be boys, and too late wake up to the fact that they are men.

We are pleased with this list, as a whole, and think it cannot fail to prove satisfactory. We want to see a reform in Awarding Committees, we dislike the present system, in toto, and shall propose a remedy in our next issue.

THE THREE MILL SCHOOL LAW.—Swindling under the name of popular education has had a good time in our newly settled towns along lines of railroad. A new town springs up, a school district is formed of the whole township, and a tax levied on non residents and distant settlers. In this township the game was played with a strong hand, the matter was taken to the courts and thence to the legislature, where it has had a final squelching out, and a few who have fought the swindle through, now save their bacon. We hate swindling, whether under the guise of free schools, charity or religion, and we can see no difference between robbing a corn crib five miles from the village, or collecting a school tax from the same farmer that distance away; and yet some of our very conscientious people have been first and foremost in this small thieving; collecting in this case over twenty cents on the acre—a pretty free draw on the new settler just carving out a new home—but the end has come.

TURNER'S CULTIVATOR, or rather the *Illinois Cultivator*, by Prof. J. B. Turner, has been put to the test, and gives us a high opinion of its practical value. We have worked our early cabbage to the most entire satisfaction; also, apple seedlings, corn, and young nursery rows. It is a wide stride in the field of progress. It is the king of cultivators.

If any of the patentees or owners of other two horse cultivators wish to show the working of their implements we will go any reasonable distance to see them, if on or near some railroad.

AMERICAN BEE JOURNAL, monthly, at \$1; published at the "Farmer and Gardener office," by A. M. Spangler & Co., 25 North-sixth street, Philadelphia. The second number of the first volume is on our table. Will the publishers please send its back numbers to date. The contents of this number are interesting and valuable: The Dzierzon Theory, No. 2—Workers not Monsters—Origin and Nature of Honey Dew—Size of Colonies—Eggs of the Bee Moth—Early Spring Treatment—Honey Districts—Analysis of the Royal Jelly—Bee Culture in Greece—Swarming and Hiving, etc.—Brood & Stimulant—The Drone Bee—Peculiarities of the Royal Cell—Chemical Nature of Honey, etc.—The Italian Bee—Honey in Cuba, etc.

Every farmer in the State should keep bees, while thousands of swarms would do well in our cities and villages where white clover is so abundant. Have your hives sheltered by buildings, high fences or trees.

PRAIRIE BREAKING.—Three horses and a sixteen inch plow will be found valuable in this work. But few larger plows are now used for this purpose. If the ground is not very dry two heavy horses will do good work. Remember, to keep your plow sharp, for if you do not you will need to double your team. A good file properly applied is the cheapest thing you can have. Look well to this point.

FIELD NOTES.—Col. Harris is making a most excellent paper of this, and we shall do our friends from Ohio a real service in calling their attention to this fact. Address, *Field Notes*, Columbus, and enclose \$2 for the year, or club with the FARMER at \$2 50, when you will have a paper from your native and adopted State.

BEEES.—Langstroth's "Practical Treatise on the Hive and Honey Bee" should be in the hand of every bee keeper in the land. It can be had at any of the bookstores, or they will order it for you; its price, per mail, is \$1 25.

THE EVENING CLOUDS we see were made to-day—made of such trifles as the breaths of singing birds and singing flowers; the melted jewelry of the morning dews, the silver night dress of the rivers and the voice of prayer. It is the heaped up utterance of yesterday. Dim, blue and beautiful, it is an enchanted mountain, though men have named it a cloud.—*Ex.*

OUR FRUIT GARDEN—In the spring of 1857 we commenced setting out our fruit garden and have made annual additions since. Of course, the trees are young and not expected to bear much as yet, but for the encouragement of those both on old and new farms who have no fruit, we will give our prospects for the season: Apples—The frost of May 1st did damage the crop, as the fruit has failed to set as full as desirable, though many of our young trees will be loaded, particularly that most valuable of all summer apples, the Keswick's Codlin. Peers—Our dwarfs are quite full, and prospect good, though the trees were all set in the fall of 1859, then two years old. Plums—Trees loaded down. Cherries—One tree of the English Morello is full; this tree was sent us by A. J. Hanford, now of the Columbus, Ohio nursery, and gives promise of being all that Mr. H. predicts of it. The Early May trees are also all loaded, while the Heart, and other sweet cherries have succumbed to the elements. Apricots—But few left. Almonds—Nearly all winter killed, blossoms few and far between, trees growing well. Peaches—Badly thinned by the cold turn about the 15th inst., not a quarter of a crop left. Houghton Gooseberry—A full half crop, bushes set in too low ground, shall have several bushels of fruit. Currants—Full crop. Raspberry, the Black-Caps, are full; plants cut back and need no tying up. Purple Corn—All full as usual; all others look fine, including the Lake Superior. Blackberries, Egyptian, promise a full crop; same of Lowton. Strawberries are late, but promise a fair crop, of which we shall give full notes in our next.

PERSONAL.—We can but return our thanks to those readers and friends who so kindly send us encouraging words. The truth is, we have no real time to spare in editorial duties, and should not assume its responsibilities. The care of a large farm and nursery, with other business, so fully occupies our time that we can only take up our pen at odd snatches. We therefore feel thankful that our short comings meet with such leniency. Were it not for this we should throw down the quill and retire to a more quiet life.—As it is, we shall work on, to the best of our time and ability, tugging at the wheels of progressive culture, and greet our readers with a cheerful smile as they welcome us to their firesides through our monthly visits.

PLUMS.—At this writing, May 26th, our plum trees are loaded with fruit a half inch in length,

and not one of them disturbed by the curculio. (See pages 167 and 168.) We can and will grow plums.

GRAND DETOUR PLOWS.—A full list of these valuable plows will be found in our advertising pages. They are now sold in the principal cities in the State.

Draining.

ED. FARMER: I have been a farmer of this part of Illinois for the past twenty-eight years, and having seen the necessity of draining and having some experience therein, I take the liberty of writing you on the subject. My first effort in mole draining was in the year 1850, eleven years since, and which I believe to be the first attempt of the kind in the State. The amount made was one hundred and fifty rods. In 1855 I made seventeen hundred rods or over five miles, all of which, including the first, has proved satisfactory and remains to all appearance as good now as when first made. Since then I have made more or less every year, and from the great benefit that I have derived from it in the supply of stock water and better crops, I would advise every Illinois farmer to thoroughly drain his land, for it will pay. Underdraining has the advantage over the open drain that you can cultivate over it, at the same time it drains the land more thoroughly than it is possible with the open ditch; it enriches the land by arresting the ammonia and other gases that the soil absorbs as the water passes through the earth to the drains—by the creation and consequent disintegration of the subsoil. I think by thoroughly underdraining a piece of land is better than a heavy coat of manure annually repeated, for the ammonia and other gases carried down from the atmosphere is retained in the one case, but evaporated and carried back into the air in the other, together with a large part of that from the manure. As the rain water comes out pure from the drains it follows that the soil has absorbed all of its fertilizing properties, while the pores of the subsoil are opened to the air, and hence we have a vigorous growth of whatever is planted. Where the land is underdrained the soil will not work, as the rain soaks at once into it, and is carried off through the drain instead of on the surface, carrying the most valuable part of the soil with it. It is well known that the air contains large quantities of matter for the growth of plants, and if the soil is compact or filled with stagnant water the air cannot reach their roots, and of course

the growth is to that extent arrested. Some plants will grow with what they receive from the air alone, but they are much more vigorous when having their roots in soil, permeable to its influence. The *S. Telephicum*, common Epine, or perhaps better known as Live-Forever is a notable example.

Lands underdrained seldom bake when plowed, even after a heavy rain, nor are they damaged by drouth. I have seen a crop of corn grown without a drop of rain from the time of planting until it was thoroughly made.

Should this meet your approval I will write again and show you the cheapness and value of mole draining.

Yours,

PIONEER.

—Let us hear from you. We like the way you talk. Your statement about making a crop of corn without rain will stagger outsiders, but we will vouch for the fact, and say to those not familiar with the west, that we have very heavy dews which are like a small shower, and if the soil is fine and kept stirred the crop will not fail; but only those who thoroughly cultivate can grow corn without rain, and then only on soil underdrained or in a very favorable condition, when by a combination of dew and capillary attraction the requisite amount of moisture is supplied.—Without rain the failure would be general, the exception partial on lands naturally or artificially underdrained and with high culture. As our friend "Pioneer" has been extensively engaged in mole draining we may look for an able advocacy of its claims. One thing he has proved, that it has maintained its integrity for eleven years in the clay loam of Central Illinois, making it certainly as valuable as wood drains, while it is not half as expensive. We want all the possible facts in practical draining, whether of mole or tile.

Ed.

Crops in Illinois.

Abstract of Reports from various Counties in the State on the condition of the leading growing Crops, and other subjects of general interest for April 1861.

ROOMS OF ILLINOIS STATE AGRICULTURAL SOCIETY, }
SPRINGFIELD, May 7, 1861. }

CHAMPAIGN COUNTY.

J. P. JOHNSON, Champaign, Reporter.

Fall Wheat—Not much sown, but looking remarkably well.
Spring Wheat—The earlier sown looking very well; later sown, indifferently.

Fruit—Heavy bloom of all kinds; not injured.

Wheat in the hands of producers—no surplus.

Corn in the hands of producers—400,000 bushels.

WOODFORD COUNTY.

I. J. MARSH, Metamora, Reporter.

Fall Wheat—2,000 acres sown; generally in good condition.

Spring Wheat—17,000 acres sown; looking well.

Corn in the hands of producers—1,500,000 bushels.

Farmers are still sowing wheat, but too wet.

MACON COUNTY.

J. H. PICKRELL, Deatur, Reporter.

There will not be so much wheat or corn sown or planted as was estimated last month, the season being wet and unfavorable. No corn or wheat being shipped, or passing out of producer's hands.

Fruit—The prospect for all varieties is good, even of peaches, which were thought to be killed.

ADAMS COUNTY.

FREDERICK BOYD, Quincy, Reporter.

Fall Wheat—20,000 acres sown; very promising.

Spring Wheat—10,000 acres sown; very promising.

Corn—100,000 acres, probably, being planted.

Fruit—The prospect could not be better.

Wheat in the hands of producers—no surplus.

Corn in the hands of the producers, 1,500,000 bushels.

Insects—The chinch bug is reported to have made its appearance in the east part of the county.

Total area of the county, 508,040 acres; tillable area, 420,000 acres; area actually tilled, 200,000 acres.

EDGAR COUNTY.

DR. WM. KILE, Paris, Reporter.

Up to April 17, scarcely any spring grain had been sown, owing to the wet season.

Fall Wheat—Still looking well and uninjured.

Fruit—A freeze on the 16th and 17th of April, has injured the crop in all probability, otherwise very fine.

But little grain has passed out of producers hands since last month.

Insects—Some pieces of early sown fall wheat have been slightly injured by the fly.

The war fever is interrupting somewhat all kinds of business.

PUTNAM COUNTY.

W. DURLEY, Hennepin, Reporter.

Fall Wheat—Little sown; looks well.

Spring Wheat—The sowing is being much retarded by frequent heavy rains.

Wheat in producers' hands—One half of last year's crop.

Corn—Three fourths of the surplus of last year's heavy crop; every farmer almost has it to sell.

Fruit—Prospect for apples good; no peaches.

Potatoes—15,000 bushels in the hands of producers.

MORGAN COUNTY.

A. ROCKWELL, Jacksonville, Reporter.

Fall Wheat—Rather less sown last year than usual, but in excellent condition.

Spring Wheat—Owing to the fine appearance of fall wheat not so much as usual is being sown.

Fruit—Prospect very fine.

Wheat in the hands of producers—no surplus.

Corn—about 2,000,000 bushels.

SANGAMON COUNTY.

A. B. MCCONNELL, Springfield, Reporter.

Fall Wheat—12,000 acres sown, looking very fine.

Spring Wheat—Being sown largely.

Fruit—Prospect for all kinds never better.

Wheat in the hands of producers—But little surplus.

Corn in the hands of producers—2,000,000.

Not much grain has been shipped of late out of the county, though large quantities are being fed to stock.

MARION COUNTY.

O. W. WEBSTER, Salem, Reporter.

Fall Wheat—6,000 acres sown; could scarcely look better.

Spring Wheat—Is never sown here to any extent.

Fruit—Every fruit tree old enough to bear seems to have its load; though in some localities the bloom was injured by frost.

Wheat in the hands of producers—No surplus.

Corn—No surplus.

PERRY COUNTY.

H. P. OZBURN, Pinckneyville, Reporter.

Fall Wheat—Greater breath than usual sown last fall and the condition was never better at this season.

Spring Wheat—We do not raise any.

Fruit—The trees, vines, and everything that bears fruit is full of young fruit—last frost was on the 16th, but it did no damage.

No surplus of wheat or corn is on hand.

Insects—No injury from them thus far.

Season rather backward, having been cold and wet.

LEE COUNTY.

W. H. VAN EPPS, Dixon, Reporter.

Fall Wheat—Cannot state accurately quantity sown : looking finely.
Spring Wheat—8,000 to 10,000 acres sown ; is being sown more largely than heretofore, being the great staple ; that and corn are the only considerable ones. Weather has been unfavorable for seeding on flat lands, but generally it looks well.
Corn—None planted yet ; probably will be 50,000 acres.
Fruit—Apples never more promising ; not many peaches.
Wheat in the hands of producers—51,600,000 bushels.
Corn “ “ —2,000,000 “
Insects—No injury from them last year.
The patriotism of the county will divert from the peaceful scenes of agriculture, 500 able bodied men.

WHITESIDE COUNTY.

A. J. MATTSO, Prophetstown, Reporter.

Fall Wheat—Quantity sown cannot be accurately stated ; not large, but looks well.
Spring Wheat—The great staple ; about 12,000 acres sown. looks well, though the weather has been unfavorable.
Corn—Farmers preparing to plant about 65,000 acres.
Fruit—Present appearances indicate a full crop.
Wheat in the hands of producers—say 800,000 bushels.
Corn “ “ —2,500,000 bushels.

DE KALB COUNTY.

H. L. BOIES, Sycamore, Reporter.

Fall Wheat—300 acres sown and looks remarkably well.
Spring Wheat—50,000 acres now sown.
Fruit—uninjured.
Wheat in the hands of producers—700,000 bushels.
Corn “ “ —600,000 “
Season has been unfavorable by reason of the rains, and consequently less wheat will be sown than was anticipated.

WINNEBAGO COUNTY.

H. P. SLOAN, Rockford, Reporter.


Fall Wheat—100 acres sown ; never looked better.
Spring Wheat—60,000 acres sown, and looks well ; the season is a month later than last year.
Fruit—All right yet.
Wheat in the hands of producers—800,000 bushels.
Corn in the hands of producers—nearly the whole of last year's crop : 1,000,000 bushels.

Many other reports were expected, but the interest all feel in the events of the day, will doubtless account for the absence of them.
Based upon the foregoing, together with the statements of many correspondents, representing nearly all the counties of the State, I desire to present the following suggestions :
1. The season has been, up to the 1st of May, more than usually backward and unfavorable to good seeding, and as a consequence, although the usual breadth of ground should finally be sown to spring small grains, the yield per acre will probably fall below the average.
2. The number of able bodied men abstracted from labor on the farms, together with the excitement and interruptions caused by the present national disturbances, will materially lessen the aggregate farm product of the current year.
3. It is the duty of every farmer, demanded alike by the cause of humanity and patriotism, to save the surplus now in his granary from waste, and to till well every productive acre within his ability.
JOHN V. REYNOLDS,
Cor. Sec. Ill. St. Ag. Society.

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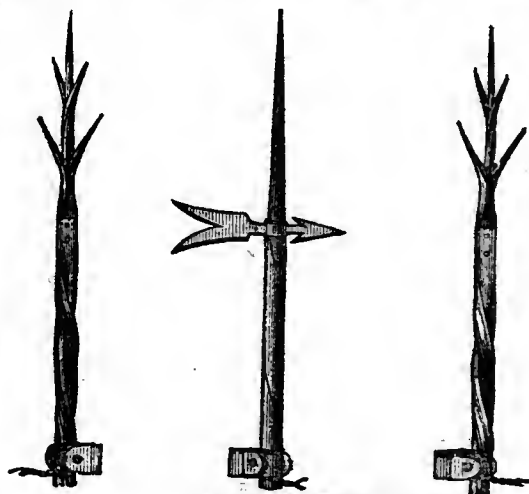
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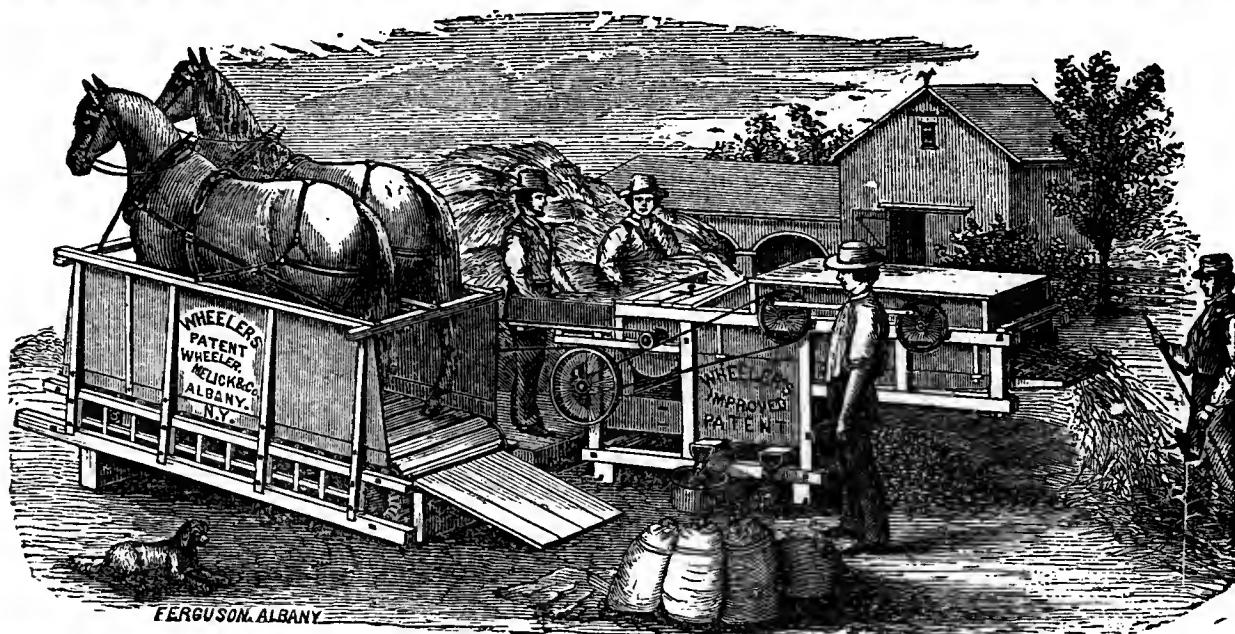
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THE ILLINOIS FARMER.

VOL. VI.

SPRINGFIELD, JULY 1861.

NO. 7.

July.

July with his ardent heat is busy for the farmer, and if we but act our part our graneries shall be filled to repletion. The music of the reaper now floats out on the morning zephyr, and the golden grain yields to the steady march through its scarred ranks of ripened spikelets. Through the lateness of the season the corn is yet in its infancy, but is making good headway, and will doubtless yet show good results. The season has thus far been a peculiar one, now cold, now windy, now hot for a day, followed with drenching rain and lower temperature, with June closing in dry and warm. The army worm has created no little excitement, and in many places has left indubitable evidence of his voracious disposition for mischief, of which we shall treat more fully in another place.

It is too early at this writing to determine the crops, but although we have had many drawbacks, yet the prospect is a fine one on the whole. The stand of corn could not be better, and probably never before equalled in the State, though the breadth planted is less than last year. The low price of potatoes has to some extent checked extensive planting, yet the farmers have given this branch of farming a fair share of attention, not so much for market as for home use. Gardening has also received more attention, and ere long our farmers will be well up with their Eastern friends in this respect. They are just learning the value of the garden, in its health on the household as well as its economy in cheapening the supplies of the larder. With an abundance of vegetables

which are so cheaply grown, a large saving is found in pork, beef and flour; the grocer's bill for sugar is somewhat increased, it is true—the excellent health of the junior members of the family and the small supplies of calomel and paragoric required are more than an offset—we stand by the garden. The drain of laborers for the war is being felt in many places, but with the less breadth planted and now favorable weather, but little inconvenience will be experienced. The great absorbing topic is the war, and of course war literature is at a premium, but everywhere we see economy and thrift and we should be thankful that no hostile squadrons tread the great prairie slopes of the West, but are confined to the homes of those who have called down on their heads the iron hand of war. With our other drawbacks has been the bursting of our banking bubble, a vicious system at the best, entailing a loss of not less than six millions of actual cash, and to that extent crippling and damaging the business of the country. The lion's share of this loss comes out of the banker's who have grown rich out of the system. The people have become too well educated in financial matters to be caught as of old, and they could see as soon as the bankers that the time of *redemption* was drawing nigh, when nought but dishonored stocks would be found to redeem with. But the day is past, and the great financial swindle of a *secured currency* is now made manifest. Had our people been saddled with a tax of six millions of dollars for the year 1861, in addition to their other burdens it would have created a storm of indignation, and why not now when the loss made by the

broken faith of the cotton States. No other Western State could stand this infraction with the same impunity and stand up against it with an unimpaired integrity, for no other State in the valley of the great river has such wealth of soil with which to replenish her exhausted treasuries. We have seen our own State bonds sold at sixteen cents on the dollar, and yet in a short time recover her credit and send them up to par. Is not this a proof of industry, climate and soil that should not be overlooked in the present crisis as elements that will soon obliterate all traces of the present financial embarrassment? We think so.

Life in the Sea.

Briskful of life at its surface, the sea would be encumbered if the prodigious power of production was not kept somewhat in check by the antagonist power of destruction. Only imagine that every herring has from fifty to seventy thousand eggs! If every egg was to produce a herring, and every herring fifty thousand more, were there not an enormous destruction going on, the ocean would very soon be solidified and putrified. The great cetacea drive them toward the shores, ever and anon driving into their ranks and swallowing up whole shoals. The whiting eat their fry; cod again devour the whiting. Yet even here the peril of the sea, an excess of fecundity shows itself in a still more terrible shape. The cod has up to nine million of eggs, and this creature, of such formidable powers of maternity, has nine months of love out of twelve. No wonder that the fishery of this productive fish has created towns and colonies. But even then, what would the power of man be, opposed to such fecundity? He is assisted by others, among which the sturgeon takes chief rank. Then, again, the sturgeon itself is a very fecund fish. This devourer of cod has itself fifteen hundred thousand eggs. Another great devourer is not proportionately re-productive, and that is the shark. Viviparous, he nourishes the young shark in his bosom, his feudal inheritor, who is born terrible and ready armed. Hence are sharks called in many countries sea-dog.—*Blackwood*.

Preaching vs. Practice.

ED. FARMER: I have been reading a great many of the agricultural papers lately, and have been greatly amused at the wide hits of the mark that many of the writers make. I, for one, cannot see the utility of filling up agricultural journals with articles deploring the poor culture of farmers, their slackness and general ignorance of all that pertains to scientific farming. Now if you will take the most slovenly farmer that you can find, and ask him why he does not do so and so and he will tell you that it

takes too much time. But don't you know that if you plow six inches instead of three that you will get more corn? Yes, I know that well enough, but my team gets so poor that I can't plow more than half as much. Don't you know that it takes twice as much corn to feed those prairie alligators that it does improved Suffolks or Berkshires. Oh yes, I know that, but then they don't cost so much at first, and then corn is cheap, and I can make up in number what they lack in weight. Don't you know that enough corn is spoiling on top of that crib to pay for lumber to cover it. Yes, but I haven't time to haul it to market now, it's only worth fifteen cents, and I can't afford to go to so much expense for nothing, and so on to the end of the chapter.

Now, Mr. Editor, this man knows all this, and what is the use of taking up so much valuable space in the papers telling him of what he already knows. Such a man can only be influenced by force of example. I have known of, and now do, whole neighborhoods that farmed in this same slovenly way, wouldn't plow deep because teams got poor and couldn't plow as much, teams didn't get fat because they had to tend to so much, teams couldn't stand a hard day's work in haying and harvest because they were poor, and when the next spring's work opened, what with hauling wood, poor stable, poor feed, and no care, our easy friend has two horses laid out to bleach, or mere skeletons that have been mortgaged. He also has a lot of their slab-sided hogs to sell that bring one to two cents less per pound than sleek well fattened ones, and he has sold a thousand bushels of corn for three cents a bushel less because the rain had rotted so much of it, yet he couldn't afford to sell five hundred bushels at fifteen cents and buy lumber to cover it. Now there's no use talking and telling him of this; figuring won't work, for he knows that they may be put to bad uses, and he don't understand the horse power figuring. Preaching is of no avail. But I tell you what will work, *practical demonstration*, that's what will do the business; an ounce of it is worth more than a dozen pounds of proaching. (By the way this rule will apply in other places as well as farming.) Let a man come into such a neighborhood that takes pains, and one that demonstrates all that he does, and in a year half his neighbors will begin to imitate, and in a few years the whole community will have changed. Such is the force of example. Now let us have less preaching and more practice. Let these men that write all these fine articles for the papers practice a little of what they preach and you will see a change for the better.

Harvesting.

Every farmer understands all about harvesting, and yet there is a vast deal of unnecessary waste and slovenness about it. In harvesting we should aim to save all of the grain in a good, tasty, workmanlike manner, and at the same time to economize labor.—The bleaching and growing of wheat is a very careless and unprofitable business, and argues largely of bad economy. The threshing of wheat from the shock is a bad practice, as the grain will always be more or less bleached, and if rains occur is liable to sprout. All grain in the course of curing gives off more or less of dampness or really water, and there is no condition so natural as when in the straw, as the straw will absorb and give it off slowly, leaving the grain in the best possible condition; in fact, there is no other way to store grain where it will keep so well as in the stack, and were it not for all kinds of vermin that live upon it, this would be here, as in England, the true way to keep it in store. It is probable that our farmers may yet to some extent adopt the English mode of stacking, but the age is almost too fast for such careful consideration of the future. In harvesting the grain should be bound as soon as possible after being cut, and the shocker should follow the binders. Some farmers set up a dozen sheaves in a double row with the heads inclining inwards. In good weather this is the cheapest plan, and a good one to cure the grain, as two or three days will suffice to prepare it for stacking, when no time should be lost in getting it up, as every dew that falls on it after it is cured will bleach it and render the grain of less value. With our heavy dews and hot harvest sun it will require but a few days to lessen the value of the crop full ten per cent., and yet our farmers apparently pay little attention to this fact.—When grain is to stand any length of time in the field, or when it is intended to thresh it without stacking it should be put up in round stacks and capped, or in hand stacks

of from one to two hundred bundles; in this way the grain and straw will cure without damage from weather, and will sweat less after threshing. When grain has stood a long time in the field in open shocks it stacks badly, and the grain will shatter out in handling; in fact, this is such a shiftless way that we wonder that it is tolerated at all, yet we find this the most common mode of putting up grain. As a general thing most farmers want to get through cutting before they begin to stack, but we cannot too strongly deprecate this practice, for it is better to secure half the crop in good order than to have the whole badly damaged, as is often the case. Even if part of the crop is cut one or two days later the loss by shattering will be less on the standing than on the cut grain, besides the less risk on account of the weather. We are liable to not only heavy, but often long continued rains during harvest, which should admonish us that we should make all safe as we go along. In stacking, when the stack is two-thirds up, it should be left a day to settle if the weather will admit, but even in this case a load of sheaves should be piled up in the center, which in case of a rain can be set out to dry the first fair day, when the stack can be finished. In finishing the stack a quantity of slough hay or red top should be placed on top to keep out the rain, though the English farmers always thatch the top of their stacks, a practice that should be adopted here when the grain is to stand any great length of time. Thousands of bushels of grain is lost every year in the stacks by the rain running down through them, probably more than enough to pay for thatching, certainly for putting on a good cap of slough grass. Occasionally we find a good stacker who will cap out with the grain in such a manner that no rain water can get in. In stacking, great care should be had to keep the middle of the stack the highest, for as the center will have the greatest accumulations of weight it will settle the most, and if not much the highest, will, when settled, form a basin into

which will be drawn all the water that strikes the outside of the stack. We saw a farmer lose nearly his entire crop of oats of seventeen hundred bushels in this way; they were totally spoiled for market, and only a few of them could be fed to his own team. Wheat, barley and rye will be less injured when placed in the stack damp than oats, and great care is necessary in bad weather in the stacking of oats, as they will heat very readily, when they become musty, and are worthless for seed and unsaleable for feed. It is better to thresh barley from the gavel, which is loaded with a barley fork, generally, the third day after it is cut; it must not lay too long, as the value of barley depends much upon its brightness when sent to the brewer; three or four extra dews on a lot of barley will lessen its value ten to twenty per cent. In stacking, three stacks should be set together, forming a triangle, with space between them for the thresher, and so located that advantage can be taken of any direction of the wind.

Overworking in harvest time is a very bad practice, and most generally proves unprofitable in the end. The days are long and hot, and to work as many do, sixteen hours in the broiling sun and falling dew, is taxing human endurance to a point beyond good economy. In this way we have seen harvesting done up in a very short time, but followed with a long doctor's bill and the hiring of extra hands. No more hours should be worked during harvest than at other work, nor will bad whisky add to the muscular force of the busy binder. Unusual hard work, the heating of the blood, the drinking of a large quantity of tepid water, strong coffee, worse whisky, and exposure to night dews, have led to a vast deal of sickness in that *billions season directly after harvest*, for which the western climate has had to bear the blame. Another item might be added: an abundant supply of saleratus biscuits and the want of the small fruits whose acid is of such value to the human machine during the hot period. On the whole we are making good

progress, and these old time habits that grew up under the pressure of too much work and too small a variety of food are fast disappearing and only to be found on some of our large farms, and those who do not take the papers.

A man seeking harvest work should look first to the vegetable garden. If there is none he will find pain-killer cards and ague specifics posted up on the walls, with one or two quack medicine almanacs hanging on the window frame; in fact, where these are abundant he need not look for a garden, for his time will be lost. But, says one, what have all these to do with the harvest—much, very much—plenty of vegetables and the small fruits keep the harvester in good health, so that he can perform his task, and the laborer who engages work, depending on fat pork, bread and strong coffee will find within a few months that the doctor and the boarding master will not only have his wages, but run up a bill against him; hence we say to all such, look well to the garden before you engage for the harvest.

THRESHING.

In this part of the State it is the custom to thresh either from the shock, or so soon as the grain goes through the sweating process in the stack, and is at once marketed or put up in cribs or rail pens for storage. As a general thing the price is good at this time, but the extra cost of labor and the necessary neglect of other farm work often more than overbalances this advantage.

In the north part of the State the straw and chaff are beginning to be of considerable value, and as labor is cheaper in winter much of the threshing is left over for that time. The great number of farm barns and substantial graneries enable them to guard against bad weather, and even to pursue this branch of farm work when they would be otherwise comparatively idle. As wheat cannot, during the war blockade, be shipped south, it is questionable whether the market will warrant early threshing this season; we

are inclined to the opinion that it will not. We would therefore urge redoubled care in stacking, so that the grain can stand out until winter without danger of loss from bad weather, if put up in ricks and well covered with slough grass, all the better. Provide storage against the time of threshing ; if you put it over until winter for then the roads will be very uncertain and you may not be able to get it to market for weeks after the grain is ready. Here a great want stares us in the face—the want of more barns—not to hold the bulky sheaves, for these we would put in stack, but a barn into which we could stow one or more stacks, to be threshed in bad weather, and where the grain would be safe and convenient for winnowing until wanted.

Care of Trees.

A very large percentage of all trees and plants set out in the spring give up the ghost long before the dog-star has culminated and another large percentage soon after. What becomes of the trees is a grave question and as capable of a solution as its congener, “what becomes of the pins?”

HOW THEY ARE “HEELED IN.”

There can be no doubt but that the autumn is the best time to take up most fruit trees, and yet the loss at that season is large, especially when they go through the *heeling* in process. A bundle of trees come from the nursery, a large hole is dug, the bundle thrust in it and a pile of earth thrown on them. To put them in the fire would be little more fatal to them, for all or nearly all will die thus treated, as has been often demonstrated, not only by farmers but amateur nurserymen who have embarked their all in their first purchase, the trees are *heeled in* in bundles ; but the tops being uninjured give signs of life, leave out after setting and then die. The nurserymen is ruined, the planter disappointed, and discouragement thrown over the whole subject. Now, had the same trees been properly *heeled in* not

one would have died, and precisely the contrary result would have occurred. When trees come from the nursery in the fall, if not set out, should be *heeled in* by selecting a dry spot where the water will not stand under any circumstances, open a trench by throwing the earth out on one side, forming a sloping embankment against which the body of the tree will rest, having its roots in the bottom of the trench ; into this trench the trees are placed singly, so that the earth will close up all interstices about the roots as though they had been set out in the orchard ; the tops of the trees to be nearly as possible on the ground for convenient covering either with corn-stalks, straw, or other litter. In this way the trees will come out in the spring in a sound, healthy condition, and will make a better growth than if standing in the nursery : 1st, because the roots will have healed over, when cut, losing no sap ; 2nd, they have escaped the sudden changes of weather, the freezings and thawings of winter, secure under the covering of of either. We cannot too strongly urge attention on this point, as many of our own customers have suffered on this head after being warned of the danger, but in this, like other matters, we need line upon line and precept upon precept, here a little and there a great deal—of care, brains and perseverance. Most of the trees brought from the East come in the autumn and are lost by bad handling. Having been grown in a moist climate, with high culture, and protected with snow covering in winter it is no wonder that they die when treated as they usually are. On the other hand, if properly “heeled in” and protected from the severity and sudden changes of our winter until they have made one season’s growth, and thus become partially acclimated in our climate before they try the open realities of our winters. If people will purchase trees at the East in preference to our own home grown ones, we would like to save them from as little loss as possible, for we want all the trees that we can get ; no danger of setting too many.

TREES SET LAST SPRING.

When these are drooping they should be cut back to a few buds, give them a thorough watering and mulch; in a few days they will show signs of returning life and active growth. This is a severe month on all newly planted trees, and too much care cannot be exercised. Look well to them, and see that they do not suffer from drouth; if you can do no more for them throw up a mound around the base of the tree to steady it against the wind and to protect the roots from the scorching sun. No leaves should be cut or rubbed off from newly planted trees the first season, as these are the life of the tree, or the lungs through which they breathe. This does not include the cutting back of trees when first set or when drooping, for in this case it is evident that the top is too large for the roots, and should have been cut back, but even now it may save the tree if the knife is judiciously applied. One thorough watering and mulching is all that will be needed. This is particularly the case with evergreens. A thorough working of the soil with the hoe or steel rake will have the effect to keep the earth moist at the roots of trees, and answers even better than mulching, but in this case do not water unless you remove a portion of the top soil to be replaced after the water has settled away. It is better to purchase ten dollars worth of trees and expend another ten in giving them the proper care than to lay out twenty-five dollars and neglect them afterwards. Of staking trees we shall have something to say as soon as we can find time to make the proper drawing to illustrate the subject.

—A Dancer once said to a Spartan, "You cannot stand on one leg as long as I can"—"Perhaps not," said the Spartan; "but any goose can."

—A person who was sent to prison for marrying two wives, excused himself by saying that when he had one, she fought him, but when he got two, they fought each other.

Hay Making.

As the season for making hay is approaching we will give a few words of caution in advance. Don't dry your hay too much. Hay may be dried till it is as worthless as straw. As a good coffee-maker would say, "Don't burn your coffee, but cure it." Our good old mothers, who relied upon herb tea instead of "potecary medicine," gathered their herbs when in blossom, and cured them in the shade. This is the philosophy of making good hay. Cut in the blossom and cure in the shade. The sugar of the plant, when it is in bloom, is not there; if later, the sugar has become converted to woody matter.

Hay should be well wilted in the sun, but cured in the cock. Better to be a little too green than too dry. If, on putting it into barn, there is danger of "heating in the mow," put on some salt. Cattle will like it none the less.

Heat, light, and dry winds, will soon take the starch and sugar, which constitutes the goodness of hay, out of it; and with the addition of a shower, render it almost worthless. Grass cured with the least exposure to the drying winds and scorching sunshine, is more nutritious than if longer exposed, however good the weather may be. If over cured, it contains more woody fibre and less nutritive matter.

The true art of hay-making, then, consists in cutting grass when the starch and sugar are most fully developed, and before they are converted into seed and woody fibre; and curing it to the point when it will answer to put it into the barn without heating, and no more.—*Ohio Farmer.*

The above we may call good, sensible advice. A large amount of hay is spoiled by over-curing every year, and though our farmers are making progress in the right direction, yet too many overlook the true mode of curing hay. Hay should be only *wilted in the swarth and cured in the cock*. Do not forget this and you will need little corn to winter your stock. ED.

FARMING IN MARIO'S Co.—We learn that eight farms have been opened near Sandoval, in this county within the last year, and that on them will be sown this fall about fifteen hundred acres of wheat. This is a fine farming county, and we are glad the land is so fast being put into cultivation. It would be extremely difficult to find a county in this part of the State that can beat old Marion in agriculture and horticultural purposes.—*Centralia Com.*

DISCOVERY OF A NEW PLANET.—Mr. N. R. Payson, lately appointed Astronomer at Madras, India, on the 17th of April last, discovered a planet which he named "Asia." It appeared as a star of the eleventh magnitude, and is the fourth he has detected.

[Written for Field Notes.]

Receipt for Black Raspberry Wine.

Provide a barrel or cask with bung; if it hold more than you wish to make it is no matter.—Take four quarts dry or five quarts wine measure of good ripe berries for every gallon of wine you wish to make. Mash or reduce to a fine pumice and add to the mass three pounds good sugar (once refined) for every gallon of wine, with warm soft water sufficient to make the mass liquid. Prepare a barrel with holes in the bottom and clean straw like a leach and put the mass to drain through, and add to the pumice as it becomes dry, lukewarm soft water till you have the desired quantity of clear liquor. Place the cask in a secure place in a cool cellar. Make the bung an inch and a half long and bore half way through it from the top with half inch bit and the rest of the way with gimlet—insert half inch lead tube ten or twelve inches long, and make both bung and tube air tight in their places by putty or wax. Now with a tumbler of water sitting near the bung, bend the tube over till the end dips under the water. In this way the gas will escape in bubbles through the water, but no air can reach the wine, and if the bubbles cease before about six weeks see to the putty around the bung and tube. When the bubbles cease it is fit for use, but keep bunged tight without racking off and it will improve by age.

H. H. DOOLITTLE.

*Oaks Corners, Ontario Co., N. Y.***Effects of War on Agriculture.**

The Springfield (Mass.) *Republican* has been surveying the field of agricultural labor, reasoning as to the influence of the war thereupon, and closes up with the annexed paragraph:

More than a hundred thousand active Northern men have recently forsaken the ordinary pursuits of agriculture, manufactures, and trade, for the defense of their country. and the entire body of those left at home are giving much time and thought to the same object. The result must be a greater demand for farm labor, a diminution of crops for the coming harvest, and higher prices for farm produce next year. The teeming millions of earth and all its armies depend solely upon agriculture for bread. Food is the first and daily requisite of every human being. In time of war there is always a sad waste of food, and more is needed for the same number than in time of peace. Buyers for the army may by wholesale empty the markets, and thus seriously affect prices. The demand for bread and meat will consequently greatly increase. The States most likely to be the scene of conflict will do but little for their own support, for the spirit of war gives a feeling of insecurity unfavorable to agricultural pursuits. The South, the present season, will produce but little, for both blacks and whites

have something else to do. Added to this the accounts from England of a wet spring, rendering planting impossible in many cases, will, it is thought, even with future favorable weather, reduce the crops fully one-third below the average.

The Tornado in Champaign Country.

The army worm had just subsided into his chrysalis after destroying thousands of acres of meadow and pasture, the chinch bug and grasshoppers were preparing for new inroads of destruction, when the elements made a grand combination, determined at one fell swoop to close out the growing crops and put the farmers into liquidation, a result well nigh attained. Wednesday, three o'clock p. m. of the 19th was set for the onslaught, and which came off in a most grand, imposing and destructive manner. We have not been able to trace it to its place of beginning, but it entered this county near its northwestern corner, passing southeasterly, west of the city of Champaign, giving the city a few scattering hail and a sharp brush of wind, passing to the eastward of Tolono in the same manner. It passed directly over our place, apparently parting and spreading out to a greater width, with less destructive powers, being more severe on both sides of us. During the fore part of the day heavy thunder showers had been seen to the north, the east and the west, and at times threatening us with a wetting down, which, as a severe drouth had set in for some days, was a much wished for infliction. After noon the clouds became more and more threatening, so much so that the teams were not taken out; and about three o'clock the storm cloud under the million horse power of the tornado hove in sight, its dark masses rolling and twisting with its giant forces bearing in its front two bands of a light water color, the whole tinged with a deep sea green and fringed with dark masses relieved at intervals by flashes of lightning.

Its approach was grand and appalling. The wind, which had been blowing briskly from the southeast, now died away to a dead calm, and all eyes were turned toward the fearful tempest that was approaching at the rate of two miles a minute; windows were hastily shut, doors closed and bolted; men ran from the fields; not a breath of air stirring; no thunder broke its stillness; no mutterings from the cloud, for swift as sound on it came, bearing in its van huge clouds of dust; a sweep with its rolling force—a dash of hail—a closing in of darkness with the roar of a thousand cataracts—a fearful two minutes and the de-

stroyer had passed. Behind it the small grains were cut as with a scythe and passed over with a roller, the rows of corn and potatoes wiped out, the fields were covered with mud and water; the hail, which was of small size but hard as ice, lay two inches deep or drifted into heaps; the orchards that lay in the centre of its path were stripped of fruit, leaves, and the bark from the northwest sides of the trees, buildings torn down, fences crushed as with a huge roller, and from amid this wreck went up the wailing cry of maimed women and children, whose homes had crumbled to pieces like pasteboard in the hands of a giant. For the first half of its course the main pathway was about three miles wide, but after passing the farm of Mr. J. B. Phinney, it spread out to some five miles, and to this may be attributed the saving of any portion of our nursery stock, which though severely injured, will to a great extent recover.

INJURY TO PERSONS.

We do not as yet hear of any fatal accident, though a large number of persons were more or less injured; in one house a woman had several ribs broken, and another two ribs broken and otherwise severely bruised; two large families occupied this house, which was blown to pieces; and, strange to say, no one was killed, and but three or four, out of some twenty, injured at all. In another house a boy had both legs broken, one of them in two places. The freight train on the G. W. R. R. crossed the path of the storm, and the caboose car was blown from the track and two or three of its occupants somewhat bruised. In all some thirty persons were more or less injured by the falling buildings, and a large number badly bruised by the hail, being unable to reach shelter.

THE DAMAGE TO BUILDINGS AND FENCES.

Nearly all the buildings in its pathway were more or less injured, and all the glass in the north and much in the west side of the houses was broken out. A large number of buildings were thrown from their foundations; some blown down and others unroofed, and as a perfect flood of rain attended the hail, the unroofed buildings were completely drenched, the plastering destroyed, furniture and household goods injured. Nothing was blown any distance, the storm appearing to roll over and crush everything it came to. The roof on the north side of our barn was crushed in and left in that condition. We had over two hundred oak fence posts broken of—none of them set over three years, and in places

where they were not well set they were thrown down; full half of the fences running east and west were thrown down. Our green-house is a lean-to against a two story building, and was thus protected, losing only about fifty feet of glass.

DAMAGE TO THE CROPS AND ORCHARDS.

For the first fifteen miles nearly every orchard in its path is ruined, the bark having been entirely stripped off on the northwest side of the trees. On the farm of Mr. Phinney not a green leaf was left on fruit or shade trees, out of several thousand, and every tree will have to be cut back to the ground. The place is three years old, and a large sum has been expended in that time in tree planting. The young orchards like that of Mr. P. will recover by cutting back; but few trees in the old orchards along the Sangamon will be saved. No bark of any account was stripped from our trees; they are badly scarred, but as this is the season of rapid growth they will in a great measure recover, and the same may be said of the nursery. Fruits of all kinds are entirely ruined in our grounds; fortunately, nearly all the gooseberries, currants and strawberries had been gathered, not over half a dozen bushels being lost. Our crop of plums, the largest and best that we have seen in the State, are lost. All the small cereals, such as wheat, oats, rye, etc., are a total loss. Early potatoes considerably damaged; beans that were up are ruined, but again replanted. Contrary to expectation, corn, the great crop of this section, is but little injured, not so much so as though cut down by a severe frost, and within the last two days it has made rapid progress to regain its lost standing. Many have plowed up their wheat fields and have planted corn, potatoes, beans, broom corn, and Hungarian grass. We have some fears as to the broom corn, that the injury to the main stalk will give it a tendency to sucker badly, which will lessen its value. The meadows had been badly damaged by the army worm, (of which we shall give a full account in another article) and the prairie grass has in many places been cut as close as the grain, but as the prospect is good for an abundant crop of corn and a late crop of clover, with other coarse feed, our farmers will not suffer. The loss of the wheat and rye crops is the most serious, as the one was needed for the hogs and the other for bread and ready money, nor can they be replaced; and new debts will have to be contracted for the repairing of buildings and fences, as there are but few

farms where less than a thousand feet of fencing went into kindling wood.

ITS EXTENT IN CHAMPAIGN CO.

As near as we can estimate from the data at hand, the storm swept over about one hundred and fifty square miles, or a strip about thirty-five miles long and five miles wide on the average, commencing with about a mile and spreading out as it progressed. Of course, in its narrowest part it was the most destructive to the crops, but less so to buildings, as we hear of more damage to them to the south of us, and also more injury to persons. We do not think the storm was more than fifteen minutes in passing over this entire tract. It could be plainly seen six miles distant, and it was not over three minutes before it was upon us.

On the whole we may be thankful that so few were injured, many of the escapes being almost miraculous, and that it was at a season when, to a great extent, we can recover from its bad effects.

The Army Worm.

The army worm, which has attracted so much attention in the center and south part of the State, on account of its damage to the meadow, pastures and other crops, has not, so far as we can learn been fully described by any of our entymologists. It belongs to the order *Lepidoptera*, and to the family of Owlet Moths, or *Noctuidea*. Mr. Thomas, and Mr. Walsh, both have the subject in hand, and so soon as they report in full we intend to have drawings made in order to give a full description, that in future this ar-rant marauder on the meadows may be known and attended to in season, so as to head him off. Last week we passed south as far as Cairo and made careful investigation into his habit, and have come to the conclusion that the habit and history of his wormship has not been well understood, otherwise we would have little cause of complaint of his now destructive progress. We have no doubt that we have an annual crop of these worms, but that from some of those causes that so envelop the whole insect tribe in mystery, that only now and then he swarms in such numbers as to attract attention.

Several writers have erred in confounding this worm with the cotton army worm (*noctua zylina*), though doubtless allied to it, yet it is so distinct in its habit that it should never be confounded with it. In fact we doubt if it has anything to do with the cotton plant at all. In the garden of Ben. Vaneil, of Union county, the cotton plant was untouched, while the border of blue grass alongside was completely cut down.— This we observed June 18th.

Harris, in his Treatise on Insects, has nothing to say of our army worm, nor do we believe it is known outside of the Ohio and Upper Mississippi Valleys. Its history and habits must therefore be studied at this point; without confounding it with its cousin, the *noctua zylina* of Say.

Champaign county appears to be the northern limit of this worm. We first saw it here the 14th of June, 1858, and it disappeared a few days thereafter as suddenly and as mysteriously as it came. Its first appearance this season was about the 1st day of June. On the 14th, in company with H. D. Emery, editor of the *Prairie Farmer*, we visited the farm of J. B. Phinney, some two miles and a half distant; there we found the worms less abundant than at a former visit; they were nearly all full grown and appeared less active. On examining the roots of the grass we found them in large numbers. Their color had changed to a darker hue and their length contracted, some of them were in the earth half an inch, others just covered with the debris of the grass and their own exuvia; they were evidently undergoing a change to the chrysalis or pupa state. This was in the meadow.— In the rye field they had disappeared two days previous, and upon examination the base of the stools was found filled with the chrysalis. We gathered a quantity of the worm of all stages of growth, with the chrysalis, which Mr. E. has forwarded to Mr. Walsh, of Rock Island, who, as our readers know is one of the most careful and enthusiastic of entymologists, and from

whom we may expect a full description of the moth and mode of propagation of this pest, together with its true name, if it has any, of which we have some doubts.

ITS HISTORY.

The first account of the appearance of this insect that we have seen, was by Jos. Brayshaw, of Perry county, near Duquoin, in 1854. Mr. B. says the worm visited that county in 1825, '26, '34, and in a subsequent communication adds in '39 and '41. He says that it dislikes clover, and ceases feeding about the first of June, and that the moth hatch from the chrysalis about the 18th. This season it ceased eating the 18th at this point; at Tamaroa on the farm of B. G. Roats the chrysalis had hatched out, doubtless some days previous. This is in the north part of Perry county, showing that the time of the appearance and disappearance of the worm is quite regular, and in the two cases under our observation in this county not over one day if any. Wm. S. Wait, of Bond county under date of April 30th, 1842, gives an account of this worm to one of the St. Louis papers; he saved his crops by ditching or plowing a deep furrow around his timothy meadow, the breeding place of the worms. He says they were numerous in 1839. Since 1842, and until the present year they have done little damage, but in looking at their past history we may reasonably look for them next season, particularly as the great breadth of timothy and blue grass gives them additional breeding places. Mr. W. says they perform their work of devastation in about four weeks. The popular belief that one or two days of hot sun will kill them we think unfounded. They do not like a hot surface and are careful to keep out of the sun, belonging to the family *noctura*, this habit is easily accounted for, as the night and cloudy weather is their favorite time of feeding.

THEIR FOOD.

Timothy and blue grass are the favorites, and it appears that they breed in them ex-

clusively, while on the other hand they change the chrysalis state and come forth in the miller form whenever they completed their feeding. On farms destitute of old meadows and pasture we think no worms will be found. Chess they are fond of, so young oats, rye or wheat; but after these grains are well headed out they seldom do more than to strip off the lower leaves, which will not injure the crops. Shrubs and woody plants like clover are seldom touched. Pinks, Phloxes, and other herbaceous flowering plants they are fond of, but in gardens and yards where there is a good stock of chickens they will do little damage. Corn is a favorite of which they make a clean sweep.

THE REMEDY.

When they appear in limited numbers hogs, chickens, and the thousands of birds so thin down their ranks that they make no headway and attract little or no attention; but in a cold, wet season, when the feathered tribe keeps close to the groves, the meadows and pastures are not so closely scanned by the birds for food, and the first brood of worms are allowed to multiply in myriads, when like an army they carry destruction in their path. When this is the case, the meadows or pastures should be at once plowed up, not less than six inches deep, and planted to corn, or sown to winter wheat or rye. If pasture, this rye or wheat can be pastured the same as though it was sown for no other purpose until late in December, when the stock should be taken off and your chances of a bountiful yield will be better than grain sown in September. If wanted for meadow, it may as well be plowed up, for you get no hay, while the corn will produce fodder; or it can be sown to corn or Hungarian grass for the same purpose; in either case then, if meadow or pasture, it is in your power to avert in a measure the evil. By this procedure you keep them out of the other crops by cutting them off before they finish their feeding,

and they die. If this course is not pursued plowing deep furrows will arrest their course. They travel slowly and in solid column, and can be easily headed off. No one need lose more than the grass where they hatch, unless they neglect this precaution. When grain is headed out and they get on the heads, two men with a long rope will quickly sweep the field, when they will drop to the ground and few of them again attempt to rise, but travel to the next field, where they can be headed off with the ditching process. They seldom leave a field in more than one direction, but this is not always to be depended upon. Now that we know the time of their appearance, and their habits, we no longer fear them, knowing as we do that we can head them off with little trouble, and thus put an end to their devastation.

The Time to Sow Wheat and Rye.

Custom, for a long series of years, has settled the time of sowing of winter wheat and rye. The last half of August has been considered the best by those advocating early sowing, but these have too often found that they are just in time for the miller of the Hessian Fly to lay their eggs in the young plant. The last attempt that we made of early sowing was a dead loss, in consequence of thus furnishing this insect with an early lodgment for its destructive brood. This effort alone has induced us to advise farmers to sow late in September, to avoid the fly, but in this we often meet another drawback. Should it prove dry at that season, as is often the case, the seed does not come up in time to become sufficiently established to stand the severe changes of winter, and between these two dilemmas the culture of winter wheat has to a great extent been abandoned. Now, it is evident that some new process, or some other time must be selected to make the culture of winter wheat a good, sure paying crop.

In the culture of spring wheat for a long time the practice common at the East was adopted, but with very indifferent success; but so soon as our farmers abandoned that for fall plowing and early seeding, from a precarious and comparatively insignificant crop, it has assumed a prominent position, and become the leading staple of the commercial metropolis of the West. It is not therefore improbable that by a like change winter wheat and rye might again take rank where it stood before the Hessian fly and the open country sunk them to the second rank. On the prairie good pasture is always a desideratum, and many people are sowing rye for this purpose and find it a profitable practice. We last year sowed some ten or a dozen acres in the early part of August. As soon as it came up the calves and colts kept it fed close, and as the season advanced, and the fall rains increased its growth, the horses and cows gave it little chance to make headway, and it was not only eaten close, but thoroughly trampled into the earth, and when winter set in no one would suppose that this field would ever return the seed sown; but so soon as the spring rains came on it came out with a vigorous growth and soon covered the ground, and the result was the best crop of rye that we have seen. Some may say that this is an isolated case, and should not be relied upon for general practice. In answer to this we have to say that in the new State of Oregon, which is said to be one of the best for wheat, the farmers now practice sowing in June, pasture the crop through the summer and fall, and make a fine crop of wheat. In Oregon the winters are open, and the wheat, unless fed down, would head out the same season and be lost. But by sowing two months in advance they have the benefit of a fine pasture and an increased yield. The old summer fallow is generally abandoned, and with the proposed change will soon become a matter of history, and yet the same principle of treating it as a biennial will be retained. In this case we

sow in the pasture field, and are not at the expense of a separate field. If this prove correct in practice, wheat and stock growing would soon become the leading feature of western farming, and their profits greatly enhanced.

The wheat growing zone is a limited one, while the consumption of flour is universal. There is therefore little danger of an over supply of this grain; while corn and the grosser staples, that have a wider range, are often in excess, and their price subject to great fluctuations.

We think the experiment well worth trying, and as it is too late to commence with June, we can do so with July. The destruction of our spring wheat will give us the opportunity of testing it, and we have sent South for seed of the May or Alabama wheat, which we shall put in as soon as it comes to hand. White winter rye can be had here in abundance, and we shall repeat the experiment with this also. We are satisfied that early sown rye makes one of the cheapest of fall pastures, and is worth sowing for this purpose alone; but if in addition to this we can get twenty-five or thirty bushels to the acre, it certainly is an object. Should winter wheat do equally well, the days of spring wheat will be numbered, and the prairies of our State will stand forth with renewed value.

Keep Out the Chess.

In sowing winter wheat and rye great care should be taken that no chess is allowed in the seed. Four years since we sowed some thirty acres of white wheat, which contained a small percentage of chess. The land on which this grew has been in hoed crops since, and well cultivated, and the chess continues to come up year after year as though the supply was exhaustless. Some persons contend that chess will not grow, but to all such we would say, don't allow yourselves to believe any such nonsense. The envelop on the chess is hard, and requires moisture and warmth to induce

it to germinate. If sown in a dry soil or moderately moist one where the wheat will come up the chess will often remain dormant; but the late fall rains generally gives it a start, however small, so that if the wheat is winter killed, it will fill up the vacant spaces; but if the wheat is not injured the chess is so shaded that it amounts to nothing more than a sickly growth, yet it will mature enough seed to keep up the supply. If you have no mill winnow it out in the wind, or wash it out in brine, but we beg of you not to sow it on any condition.

The State Fair.

It is a matter of congratulation that the officers of our State Agricultural Society have decided to hold the Fair, or rather they have decided not to postpone it. Other States have suspended, and but few of our county societies will this year come up to the good work. It is therefore doubly important that the State authorities do their duty. Because half of our banking capital has been swept away and the other half suspended and the price of farm products down to a lower point in consequence, and the vast machinery of commerce at a dead halt—many think it is to remain so, but of this they will be mistaken; good money will certainly flow into the country and all the channels of commerce again be filled. The effect of the war has thus far been in the depreciation of our currency with its attendant train of evils, but it will soon be found that a drain of six millions will only check the current of our prosperity, not bring it to a close. The other six millions in suspense will soon be free; besides this we have economised almost as much as we have lost, and in three months we shall be in good sailing order again. The State Fair will do us good, especially at this time; it will bring together the best minds of the State at the great commercial center. They will then see that business is restored, and will return to infuse new life into all parts of the State. Whether the war continues or not we must find ready sale for our

products, especially wheat, which is again becoming the great staple of the State.— With such a magnificent premium list as is offered we cannot fail of a good show. Add to this that we have the assurance that the Fair grounds are the most ample, and will be fitted up in superior style, with abundant facilities for transportation, and who will think of remaining away, or rather, what farmer or mechanic can afford to lose this opportunity to inform himself and take lessons in this great industrial school. No one need fear for the want of accommodations in the city, as they will be the most ample.

The testing of heavy ordnance and of other arms will be highly interesting. But few people ever have an opportunity of the kind; certainly we of the West have not, nor is it probable that this opportunity will again occur, or at least very soon.

Let every one look over the premium list (copies of which can be had of the officers or of J. P. Reynolds, Corresponding Secretary, Springfield,) and see if there is not something that they can compete for; especially should fathers encourage their sons to get up something for the Fair, for even if they take no premiums this time, they will learn the ways and be ready for a more successful trial next year. Recollect that niggardness, or perhaps to use a more appropriate term, *stinginess*, is not economy, and that if you wish your sons to rise in the scale of usefulness you must give them opportunities for improvement, and we would ask in all candor if a week can be spent more profitably than in attending this great industrial gathering from the field, the orchard, the workshop and the studios of the Northwest. The richest gems from all these sources will here be placed side by side for comparison, for criticism or eulogy. A farmer should be a lover of the useful and the beautiful both in nature and art, and in no place can he find these so happily blended as within such a show ground as this will be. The railroads are to carry goods for exhibition to and from the Fair free, and passengers at half

price. This, in itself, is no small inducement to visit the city, the commercial center of the Upper Mississippi and of the upper lakes. A week spent in seeing the city and the great Fair will be to the sober and industrious a week well spent, for no one can fail of returning home with enlarged views of the resources of the great prairie slopes that give life to western commerce and sends up the smoke from thousands of engines that are busy fashioning the work of use and of beauty.


Bee Moth and Swarming.

The bee-keeper should be unceasing in the inspection of his bee-hives, as a few days' neglect may result in losing entire swarms by the moth. They should be looked at every two or three days and the grubs killed. We nearly lost a swarm a few days since on account of not keeping up a sharp lookout. The hive was not opened for about ten days, and when it was opened the moths had a grub in nearly every cell, and some of the combs were eaten entirely up. This hive was the first that swarmed, and by some means they failed to raise a queen, and being weak the miller had a good chance to lay its eggs. Had the hive been one of the old box hives we should probably have lost the entire swarm, but the combs being moveable we cut out the comb and scraped the hive clean, then took about six sheets of comb from another stock that had brood comb in it and placed it in the weak hive, and the consequence is that our bees have gone to work and are now as busy as ever. How it will succeed in the end is yet to be found. Perhaps on account of removing part of the former from the strong stock they may not swarm, and it remains to be seen if the old swarm will recover and do as well as the new swarm would have done.— We have practiced artificial swarming and it succeeds admirably, and were our hives all of the same pattern we should never allow a hive to swarm naturally. *

Rye for Sheep.

Rye is one of the most valuable of the green feeds for sheep. A friend of ours, an amateur farmer who has his means all locked up in real estate, but who is determined to make it pay his expenses in spite of the hard times for all real estate speculators, enclosed four hundred acres, which he rents out on shares, the most of which has been cultivated in corn since the crash of 1857. Beginning to fear that his third of the corn crop would not pay his taxes on some thousands of acres of wild land, with his other expenses, applied to his arithmetic, which convinced him that a thousand good mutton sheep would help him out; so after the corn was laid by he persuaded one of his tenants to allow him to sow some thirty acres of rye among the corn. His thousand sheep were purchased in August, herded wherever he could find feed until the corn was ripe, when they were turned on the young rye, and which was their principal feed until the first of June, when it was turned under and planted to corn. A portion of the crop was well fed down, but had it not been for the standing corn stalks a respectable crop could have been harvested from a part of the field.—Here was the large part of the feed of a thousand sheep for eight months costing twelve dollars for seed and about the same for labor, and returning the land in far better condition than it was before, no doubt to the extent of the seed and labor. We have never seen a lot of sheep and lambs at this season in so good condition as this rye fed flock.

The flock is now on the prairie, and will remain there until his meadow is ready to turn into, when the rye pasture will be repeated. He will clear at least fifteen hundred dollars the first year in this operation, the result of brains in farming.

 Grain of all kinds has been lavishly sown in southern Pennsylvania and Maryland, and gives evidence of a superabundant harvest.

The Curculio.

A late number of the *Horticulturist* contains a communication from an old and well known cultivator of Cincinnati, reviewing and criticising the different modes which have been adopted for destroying or eluding this troublesome insect.—He says, “some shake the trees. I believe this would be a safe remedy if they would begin at daylight, and shake the trees till night, not even leaving the trees to eat their meals.” We entirely agree with him. Where the insects are not abundant, a less frequent or continued shaking might answer. But this “shaking” must not be confounded with the greatly superior process of *jarring* the insects on sheets and *destroying* them.—Many have merely tried the first remedy occasionally, and from its failure have denounced the latter, supposing them to be nearly identical.—There is scarcely any resemblance between them. Shaking repels or drops only a portion of these depredators; many remain fast in the tree. Go to a tree that contains twenty curculios, as is sometimes the case where they have been unmolested; “shake” it, and perhaps one-third, or possibly one-half will fall; “jar” it with the hand, or strike it with a mallet wound with cloth, to prevent bruising, and perhaps one-half of the remainder will fall; strike it sharply with the back of an axe, and every one will come down. All this we know from experience. To prevent bruising, a limb should be sawed near the body of the tree, leaving a stump an inch long to receive the blow. Now it will be observed that there will be enough left after the shaking to puncture all the fruit, or even after the soft jarring, which is a sufficient reason why these modes have failed, or but partially succeeded. The daily or twice daily jarring must be continued for several weeks, in order to kill the new comers which daily appear. By intermitting two or three days the fruit may be all stung, which is another cause of failure. It is not necessary to cite the many instances which we have witnessed where the jarring and killing process has proved completely effectual. Shaking alone, without killing which appears to be the mode alluded to by the writer, can accomplish but little, unless constantly repeated, as the insects will soon find their way back to the trees.

The next mode which this correspondent alludes to, is the use of “various washes and fumigations of horrible odors,” and “offensive manures under the trees.” He thinks these might succeed, but adds, “I should not wish to live in the house, nor make the family a minute’s visit,” where these odors filled the air. “If they would not meet the approval of the curculio, they would not meet mine.”

He recommends planting trees so as to hang over water; but this would be inconvenient, and often impossible, and the editor remarks that it has repeatedly failed.

He especially recommends paving under the tree. This would prevent a future crop being destroyed, as the larvæ could not escape into the earth, and must consequently perish on the hard surface. It will not kill the insects of this year, nor cure the fruit already stung, and is

precisely similar in its results to the "pig and poultry" remedy, and to Ellwanger & Barry's mode of beating the earth smooth and sweeping up daily the fallen infested fruit—all three destroy this year's worms, and save next year's supply. The jarring and killing method saves the crop of this year, and has, therefore, by one year, the start of the other three. These four remedies are the only ones of any value. The "pig and poultry" and the "jarring" process combined, constitute the most efficient cure for the evil.—*Country Gent.*

Great Excitement!—Gold Discovered on the Columbia Slough!

ED. OREGON FARMER: As the public mind seems to be in a high state of excitement on account of the recent discoveries of gold on the upper Columbia, I thought it might not be uninteresting to some of your readers, to know that extensive *quarts* leads and surface *diggings* have recently been discovered on the Columbia Slough, only six miles east of Portland.

I arrived in Oregon a little over a year ago, and in miners' phrase, was "flat broke," and being green—right from the Green Mountains of Vermont—and having heard it said there was gold in paying quantities in the vicinity and on the banks of all the rivers in Oregon, I commenced prospecting up and down the Columbia bottom, from the mouth of the Sandy to the mouth of the Willamette rivers, and have found the whole valley filled with splendid "quarts leads," and in many places extensive "surface diggings." I have given them the name of the "New-milk I-mean Mines."

I have a "quarts mill" in operation which has, so far, yielded a very fair profit. I have used No. 1 dairy cows for crushing out the "quarts." Each cow crushes out from six to twelve "quarts" per day, which, when panned out yields about thirty-five cents to the panner. There are many singular features about these mines; as, for instance, quality of the gold, and the manner of obtaining it.

I think the purity of the gold surpasses any yet discovered, for when properly panned out it has invariably proved pure coin, and I have never paid one cent discount to get it exchanged at any banker or broker's office where I have presented it. The manner of obtaining the gold is very different from the usual mode of mining, but may be varied to suit the fancy of the miner. Instead of long-toms, rockers, sluices and riffle boxes, I use the cheese tub, basket, press, churn and butter worker. And instead of using quicksilver on copper and silver plate, I use salt and rennet, prepared in a white earthen pitcher. But, Mr. Editor, I find it impossible to speak of the advantages of these mines in this letter to the people of Oregon, over those of the Rock Creek, Nez Perce and Pen de Oreille, and defer it to another number, but would say to the farmers of Oregon, prospect your farms at home thoroughly before going to the upper Columbia mines, for I have not seen a farm in Oregon yet, that did

not contain diggings that would make any man independent in ten years if properly worked.

Yours, etc.,

VERMONT.

P. S.—I forgot to mention the singular fact that the "tailings" from my "quarts" works make splendid feed for hogs—depositing in the meat from six to ten, and in a few instances as high as twelve and a half cents worth of gold per pound. Also that garden vegetables, oats, wheat, and in fine almost every production of the farm contains a large percentage of gold.

V.

Columbia Slough, May 7, 1861.

We take the above from the *Oregon Farmer* of May 15th, which is just at hand. "If properly worked," that is the secret; if we will properly work our farms there can be no doubt that we can pan out the gold in paying quantities. We need not go to Oregon for the diggings, for they are right here in the precious drift that forms our prairies.

ED.

The Price of Wool.

Almost every Eastern paper we take up, particularly those published in the manufacturing States, contain articles going to prove that wool must be sold very low this year. Many of these papers seem to think that if the farmers get 15 or 20 cents they may think themselves very fortunate.

Now, we fail entirely to see any good reason for this opinion. The following table will show the prices of wool in Chicago for the last eight years:

	June.	July.	August.
1853.....	40a55	38a50	35a45
1854.....	20a30	23a31	20a30
1855.....	20a34	25a36	25a38
1856.....	20a87	20a37	20a87
1857.....	25a38	25a40	31a42
1858.....	16a30	18a30	25a34
1859.....	25a40	25a42	25a42
1860.....	25½a43	25a45½	25a47

So we see that the average price lowest in any one month in these eight years was 23 cents, while the highest average price was 40 cents.—The average price last year was 35 cents.

Now, it is very certain that there will be more demand for woollen cloth this year, next year, and probably year after that, than there has been for some years past. We have an army of 200,000 men, soon to be increased to 300,000 men, in the field, all of whom must be clothed in woollen cloth.

This alone would make a forced consumption nearly equal to the ability of our whole wool crop to supply. Then the ordinary uses for wool still continue, and we see no reason why wool should not be higher, instead of lower, than it was in 1860.

At all events, farmers can lose nothing by holding on to their wool. It will certainly be no lower,

and we have full faith to believe it will be higher. Beware of the speculators, as you will lose nothing.

There is very little doing in wool here at this date. The nominal rate is 18a28 cents, while at this time last year the market was active at 28a42 cents.—*Chicago Tribune.*

We think the above a correct view of the subject, and hope our wool growers will consider carefully before they part with their wool. Another thing, beware of such bank paper as may be paid you, for if anything can be palmed off in place of specie funds it will be done. ED.

From Home.

The Grain and Fruit Prospect in Central and Southern Illinois—Coal Mines—The Army Worm—Mode of Farming—Camp Defiance.

So little have we traveled this year that we had almost lost the idea of progress, and began to take to books and newspaper and to follow in the footsteps of one Mr. Fogy, who busies himself with musty volumes and supposes his garden boundary to be the outer wall of creation. A few days since, as the soldiers say, we ordered rations for a week, determined to see what was doing south of us.

THE CROPS AT HOME.

The winter wheat was not very thick on the ground in March, but it tillered out well and gives promise of a good crop. The early sown spring wheat is also fine. A few persons sowed late, some of them on land plowed this spring; of course these stand but a slim chance, and by next spring they will have more practical or at least profitable views of the time and mode of growing spring wheat. Barley is good; rye is very fair, and a large breadth sown for "hogging down;" that is, the hogs are turned in to do the harvesting. This is becoming a profitable and popular mode of early feeding, and to that extent supercedes the use of corn; potatoes only moderate, the cold rains having a bad effect on those early planted; broom corn, flax, beans and sorghum are promising. The stand of corn is the best that we have ever seen, in fact it is too good, and most of it will have to be thinned out with a hoe; some farmers are now performing this service. The army worm having furnished an abundant supply of food for birds and other vermin; they have had no occasion to pull the corn, nor has the cut-worm shown himself, as usual, but even with this fine stand the land has

broken up rather ungenial, and if this present promise of a cold season continues the crop will certainly be a light one, nor do we think the best of weather, with this ungenial condition of the soil will make more than a fair average crop.—We are neither a croaker nor the son of a prophet, but draw our conclusions from the well established laws of nature. To overcome this condition of the soil we have used the iron roller freely, and in addition have made a one-horse roller that will pass between the rows to crush the lumps, and up to this time we have already worked our corn three times, but with all this it is making but a moderate growth. Corn dealers may draw their own conclusions or even laugh at these notions, which some of them have done, in private conversation. July and August make the corn, they say, but July and August never made a big crop on lumpy, unpulverized soil. Last season the soil was in the finest possible mechanical condition and a good crop could hardly be avoided. We have long since learned to look more to the condition of the soil than the weather, though the latter has a decided effect upon the farm.

THE CROPS IN EGYPT.

We enter the great basin of Upper Egypt at Neoga, and can see at a glance that the same remarks hold good in regard to the corn crop; in fact, it is hardly as forward, even the best of it, while much of that cut off by the army worm and replanted is but just up. The roller must and will be soon added to the implements of corn culture in Egypt, if her farmers would keep pace with the progress of cheapening its culture and insuring its greater certainty. The winter wheat and oats are here very fine. The Alabama or May wheat is beginning to ripen as far north as Mason, while the Blue Stem is ten days later; at Richview we meet the first of the harvest in a solitary field of a few acres and another degree of latitude is passed before the harvest becomes general, even with the May wheat, being some three weeks behind the usual time.

AT CENTRALIA.

The fruit crop at this point is exceedingly promising, and the young pear orchards are loaded with fruit. The curculio has been less active than usual, contenting himself with a part of the plum crop and leaving the peaches nearly untouched. This remark was found to hold good throughout our trip; the lovers of good peaches therefore will find those from Egypt free from the usual drawback of a gumming outside and a worm

within. The peach crop will be so abundant this year that none but the best will pay to send to market, and the drying ovens that have almost gone to decay will again come into use. Several of the best gardens in the city have been neglected this season; the bad weather is blamed for it, but wherever open or covered drains have been used we see a decided favorable result.—Conductor Montross has probably the best arranged and most profitable fruit garden in the State. It contains but two village lots, yet in point of abundance of fruit and vegetables it compares favorably with most of the one and two acre gardens upon which large sums have been expended. From our own limited experience with the dwarf apple we had not formed a favorable opinion of it, and as it had been largely planted in the gardens hereabouts we have been looking for proof of its value, but we regret to say that it has thus far proved a disappointment, and to those who suppose that from this class of apples they can realize a crop at an early day, we say moderate your expectations and plant early bearing sorts, such as the Keswick's Codlin, Yellow Injestic, etc. Mr. Rockwell, another conductor, has the same sized grounds, but unfortunately some tree pedler persuaded him to go largely into dwarf apples, and though he has the finest show of trees, yet we did not see a single apple in his grounds, while standard trees of half their size are bending beneath the loads of fruit. Until we have better evidence of the value of the dwarf apple on the prairie we shall not recommend it, even for garden culture, much less for the field, as some have done. We are not prepared to call it a failure, for after the trees become full grown they may prove productive, but for early fruiting they are undesirable.

The railroad company is laying the foundation for the rebuilding of their shop, destroyed by fire last spring. The office of the Superintendent, Mr. Herkimer, of the Chicago Division has been located here, which has given this point a new importance. Mr. Herkimer has made a decided improvement in the appearance of the place by grading, draining and the setting out of shade trees in the companies grounds, and the station house, always well kept, presents a more inviting appearance to the traveler. When the shade trees and shrubbery shall have a few more years of the vigorous growth that the soil and climate of this part of the State applies to such subjects it will be one of the most beautiful places in the State. Superintendent Arthur and Chief Engineer Clark are also great advocates of tree planting, and have done much to infuse a healthy sen-

timent in this regard among the officers and employees of the road, and we now have a set of men pretty well imbued with the value of shade and fruit tree planting. We never pass through Centralia without admiring the comfortable and pleasant homes of the railroad boys, and compare them with the close quarters and brick walls of their co-laborers of the large cities.

COAL MINES AT ST. JOHNS.

These mines are the most extensive and valuable in this part of the State. They were supposed to underlie several counties besides Perry, but more recent examinations have changed this impression. Instead of large continuous beds of coal it would appear that the deposits are in basins of limited extent, and this one is supposed to be not over six miles in diameter. Doubtless similar basins abound in this part of the State, but for the want of railroad facilities will for a long time lay undisturbed. Wishing to obtain some specimens of plants of the oiden time, and to look more closely into the history of the army worm we left the train and accepted the kind hospitalities of A. W. Nason, one of the owners and superintendent of the coal works at this station. Under the guidance of Mr. McKellups, the foreman, a party of three, each with a lamp, descended into this great storehouse of fuel, and which is overlayed with vast deposits of plants incorporated in the slate that forms the roof, and which shut out the water that would otherwise decompose the coal. We can but admire the economy of nature in first forming these vast deposits of fuel, and then in protecting them from disintegration, or weathering down into common soil. It is well worth a visit to this part of the State to take a look into these rock records of the world's history.

In one part of the mine a vast tree or fossil of the rush family, and at least three feet in diameter, had been discovered by the falling of the slate that surrounded it, a section of which had broken down and lay among the fallen slate. After the coal, or at least the material of which it is formed had been deposited, this immense member of the rush family must have stranded on it, and like some giant sawyer in the Mississippi been held in place until the ferns and clay had accumulated about its base and fixed it in a solid matrix. We brought away specimens of the rough flated bark, but found it ready to crumble on reaching air and light; an application of varnish will retain some of the more solid portions. We also brought with us fine specimens of ferns

of Sigillarea, Stigmarea and other ancient plants now changed to cold, grey slate, or printing their delicate forms in coal on the thin layers of this impervious semi clay. The coal in this mine is very pure, having qualities nearly allied to that of cannel coal; it burns with an ash and never fills the stove with cinders. We have used it in our family for all purposes of fuel for the past three years, and it gives the best satisfaction. It contains no sulphur and burns with a clear flame in the open grate. As many of our people have an idea that our Illinois coals are unfit for cooking purposes, we take this occasion to correct the error, at least in this instance. The railroad company is now using large quantities of this coal in their locomotives and blacksmith shop.—All we now want is capital to apply this coal to manufacturing purposes; with cheap fuel, cheap food, and in direct communication with the cotton fields of the South, Central and Southern Illinois ought to do something besides growing corn.

THE ARMY WORM.

The first account we hear of this worm came from the county of Perry, as far back as 1825, when it was very destructive. It reappeared at unequal periods in 1825, '26, '34, '39, '41 and '42. Since then it has attracted no particular attention. There can be no doubt that it appears annually, but that from the abundance of its enemies among the ichneumon and birds it is kept within bounds, but occasionally, in the absence of these, it swarms in fearful numbers. In April, for two or three days the air was filled with millers, which have since been proved to be the moth of this worm; these must have laid their eggs by the million at the base of the cultivated grasses, from whence the grand army, after having destroyed all that was green marched to other fields. It is curious that they dislike clover, seldom eating it, if at all; but, unfortunately, little clover is grown in this part of the State. Unless badly pressed for food they seldom damage the growing wheat and rye; perhaps at that season its growth is too much advanced to please them. Mr. Nason drove us some twenty miles through the country, and we saw some thousands of acres of wheat from which they had stripped every leaf, leaving the stem and head. We could not discover that it was injured, as the heads were well filled and berry plump. Every meadow and pasture that we saw had been denuded of its crop of grass as completely as if fire had run over them; thousands of acres of corn had been re-

planted; the grass and flower plants in the yards had been overrun and the foliage destroyed.—They do not attack the root, but simply make it the place where they burrow to pass through the chrysalis state. Few attempts had been made to arrest their progress, even with the spade and plow. It is singular that so destructive an insect as this, and one that has been known so long, say thirty-seven years, and making at least seven very marked visits, should not have had its habits better known than would appear to have been the case, but the farmers of Perry county we suspect are no great readers, and from the general absence of school houses in this twenty mile drive, we think the prospect is not good for a rapid improvement in this direction. In most other parts of the State the farmers read, and as the army worm may visit them it will be well to point out some of the habits of this unprofitable visitor.

THE REMEDY.

(See "The Army Worm," in another chapter.)

When this insect is about to appear in large numbers we have notice of it in the swarms of brownish or yellowish-brown millers, which are about three-quarters of an inch across the wings. They lay their eggs apparently only in Hurd's grass or blue grass grounds, and when in large numbers the only way that we can suggest is to turn it under at once and either plant to corn or sow to oats. This will destroy the worms and give a crop, and at the same time will protect the field of corn and other crops. If this is not done ditching must be resorted to at once, to keep them from leaving the grass land. As they march but slowly, not over half a dozen rods a day, furrows can be plowed ahead of them, two or three of them made deep and the loose earth thrown out with a shovel, will keep them in. This, if well done, is effectual, for they do not hatch in the grain fields, but go there. When they get up to the heads of the grain, which they do after they have eaten leaves; they sometimes, if it is not well advanced, destroy the heads, and it is important to dislodge them. Take a rope three or four rods long and let two men sweep the field with it, the worms will all drop to the ground and not again attempt to reach the heads, but travel to other quarters. No farmer, therefore, need lose anything more by them than the meadow and pasture, and these can be plowed up and planted to corn, or if needed for pasture sown to rye for pasture or corn for hay, Hungarian grass is so uncertain, and of so little value that we are not disposed to recommend it.

AT DUQUOIN

Is a fine peach orchard adjoining the village on the east, of some seven thousand trees, all of fine grafted varieties and loaded with fruit. Those who fancy that the prairies of Egypt are not adapted to fruit, would do well to visit this county and pass through this patch of peach trees, and then visit the pear orchard of Mr. Yates, near Tamaroa.

CULTURE OF WHEAT.

This article is growing too long, and we shall have to leave out much that we had intended to say, but we cannot pass over the mention of a field of fifteen acres of wheat near Tamaroa. It was on part of a large farm rented to several tenants. One of them who had been in the practice of manuring lands before he came to this place, and so much in the habit of doing so that before he was aware that he was breaking over long and well established rules, such as had been canonized in the hearts of the farmers hereaway, that it was cheaper to move the barn than the manure he had hauled and spread a liberal supply on a field of fifteen acres, which he sowed to wheat. The result is, about forty bushels to the acre, or from ten to fifteen bushels more than the best of that not manured. So much for getting outside of established usage.

CHESTNUT TREES.

On the farm of Mr. B. G. Roots we saw several chestnut trees thirteen years old; they were very thrifty and had borne several crops. At our visit they were in bloom. We can see no reason why this tree should not be extensively used in this part of the State for belts to protect the orchards from heavy winds that do no small damage by throwing down large quantities of the fruit before fully ripe.

CLOVER.

But little clover is grown in this part of the State, and farmers say it does not do well, and that it is very difficult to get a stand of it. We suspect it might do better if the land was manured and sown in February, so that it would become established before the heat of summer burns it out. Possibly it is too far south for clover, but we do not think it has thus far had a fair trial. Farmers who fasten their gates with log chains, climb over a rail fence to get to the house, carry their water twenty rods from a hole dug near a slough, or leave their manure to accumulate about the barn, are hardly good authority

on this subject, but the day of improvement is at hand, when the soil of Egypt will assert its value.

THE CHICKASAW PLUM AND THE CURCULIO.

Some of our nurserymen and fruit growers have contended that this native plum was not subject to injury from the curculio, and extensive sales of the tree have been made upon this hypothesis, but in this visit we have indubitable evidence that it is not so. In a garden containing both the Chickasaw plum and the common blue plums, the former had suffered as severely as the latter, and it should be remembered that this insect is not as destructive this year as usual. We are not surprised at this, for we have never found the curculio very particular about where he laid his eggs.

FRUIT ORCHARDS AT COBDEN.

Since our last visit to this place we observe a decided improvement; strawberry culture is becoming a favorite and a large number have put out plantations from one to two acres each, mostly of the Willson's Albany. The grapes have suffered some by the rot, but on the whole the crop is promising. The peach crop is fine, both in quantity and quality, and we may look for large supplies from this part of the State early in the season. The want of manure for these hill sides is the great need, but a better system of husbandry that is being adopted, will to some extent make up the want; soiling instead of pasturage will have to be resorted to, and as clover does better on the timber land than on the prairies north, as before noticed, it will come into more general use.

TOMATOES.

The supply of tomatoes is not large and the crop is late. Probably not over one-fourth of the usual number of plants have been set out, but as three weeks of the usual season will pass without the use of this vegetable, the northern gardens will begin to supply the demand by the time the supply is exhausted here. Had the usual quantity been grown here they would not have paid the cost of culture, and even now we cannot promise a very high price, but all the better for the masses who need this healthful food just now, when July demands the acids to counteract the bilious tendencies of the summer.

CAIRO.

What a change since our last visit; then all was bustle in the line of shipments, the trains

came loaded, the warehouse filled to repletion and the levee lined with river craft, busy in the peaceful pursuits of life, exchanging the products of the North for those of the South—now the river guarded with huge cannon and thousands of armed men watching with argus eyes that nothing pass this great highway of a nation. Well, when the four hundred thousand despots who have plunged the sunny South into anarchy shall be deposed, and the strong arm of right shall have again asserted her mild and benignant reign, Cairo will come forth regenerated and be one of the important points in the Northwest, for it is just here winter bridges the rivers of the north.

NAVAL CADETS.—A resolution has passed the House instructing the Naval Committee to inquire into the expediency of providing for the appointment of the full number of cadets from such States as have not now in the naval service the number to which they are entitled by existing laws; and if from any of the States recommendations are not made, the number shall be taken from such States in the same section of the Union as shall apply for the places in said school.

PENSION TO COLONEL ELLSWORTH'S MOTHER.—The committee on Military Affairs in the House is instructed to report a bill granting a pension to the mother of the late Col. Elmer E. Ellsworth.

—A member of the South Carolina Legislature—an old batchelor, by the name of Evans, was introduced to a beautiful widow, also named Evans. The introduction was in this wise: "Mrs. Evans permit me to present to you Mr. Evans." "Mrs. Evans!" exclaimed the spirited bachelor, "the very lady I have been in search of for the last eight years."

—When a generous man is compelled to give a refusal, he generally gives it with a worse grace than the ungenerous one: first, because it is against his nature: and secondly, because it is out of his practice.

—When an Irish girl was asked, a few days ago, where her mistress was, who had gone to a water cure establishment, she replied that her ladyship had "gone to soak."

—A rural poet, in describing his lady-love, says:—"She is as graceful as a water-lily, while her breath is like an armful of clover." His fate is certainly approaching a crisis.

—A Pike's Peaker returned a few days since with five thousand dollars in gold-dust in a bag. His wife brushed fifteen hundred dollars more out of the seat of his old pants.

Yankee Doodle.

BY T. S. DONOHO.

"Yankee Doodle!" long ago
They payed it to deride us,
But now we march to victory,
And that's the tune to guide us!
Yankee Doodle—ha! ha! ha!
Yankee Doodle Dandy!
How we made the red coats run
At Yankee Doodle Dandy!

To fight is not a pleasant game,
But if we must, we'll do it!
When Yankee Doodle once begins,
Our Yankee boys go thro' it!
Yankee Doodle—ha! ha! ha!
Yankee Doodle Dandy!
"Go ahead!" the Captains cry,
At Yankee Doodle Dandy.

And let her come upon the sea,
The insolent invader—
There the Yankee boys will be,
Prepared to serenade her.
Yankee Doodle—ha! ha! ha!
Yankee Doodle Dandy!
Yankee guns will sing the bass
Of Yankee Doodle Dandy!

Yankee Doodle!—how it brings
The good old days before us!
Two or three begin to sing,
Millions join the chorus!
Yankee Doodle—ha! ha! ha!
Yankee Doodle Dandy!
Rolling round the continent
To Yankee Doodle Dandy.

Yankee Doodle!—not alone
The Continent will hear it!
But all the world shall catch the tune,
And every tyrant fear it!
Yankee Doodle!—ha! ha! ha!
Yankee Doodle Dandy!
Freedom's voice is in the song
Of "Yankee Doodle Dandy!"

IS CORN SMUT POISONOUS TO CATTLE?—Mr. E. Wood, of Lester, Iowa, says the *Prairie Farmer*, lost three oxen, three cows and three calves last winter, he supposed from eating the snouts of cornstalks. He raised one and a half acres of King Phillip corn, which was very smutty, "not only many ears with smut upon them, but occasionally bunches of clear smut—all left on the stalks, bound and stacked." When cold weather came on the cattle were fed plenteously on these stalks. On the morning of the third day he found one dead, the eighth died within two days. They were supplied with water daily. "The first symptoms were weakness; would reel in walking. If lying down would lie apparently easy for two hours; then begin to twitch or jerk the shoulders, breathe hard, roll on the side occasionally and groan. For one or two hours before dying, would lie continually on the side, with legs stretched out, and manifest extreme pain; would die within six or eight hours after showing the first symptoms of the disease." All masses of smut grown on cornstalks, or any part of the ears of this grain, should be carefully removed, so as not to taint the fodder or seed of the plant consumed by man or beast.

—A girl recently stole a pair of gloves, giving as a reason that she only wished to keep her hand in.

THE ILLINOIS FARMER.

BAILHACHE & BAKER.....PUBLISHERS.

M. L. DUNLAP. EDITOR.

SPRINGFIELD, JULY 1861.

Editor's Table.

June always was an interesting month to the cultivator, and one on which his hopes for the season may in a great measure be said to rest, for if we attend to our duty this month we may expect to merit a due reward. June, though, to the poet, is the month of roses, and in many of its aspects the most pleasing and lovely of the year, is often filled with dark spots in the escutcheon of the farmer, for during this month the insect tribes love to revel in mischief, and in this month the hail storm often plays sad havoc in beating down the crops. This year the army worm has been the most busy since 1842, a period of nineteen years, sweeping off thousands upon thousands of acres of meadow, of pasture, and of corn. The Hessian fly has in this month completed his transformations, and is now ready to lay his eggs, but his career will be short, and we no longer fear him as of old. The chinch bug is ready to do us damage, but cold seasons like the present do not suit him, and he must await a more genial sun. The army worm has supplied food in abundance to the feathered tribe and other vermin that delight to pull up the farmer's corn, and never have we seen so perfect a stand as this season; we have not seen or heard of a single hill that has been pulled by any of these marauders that usually prey upon the young corn. From this we may take a hint, feed them with worms, by plowing, or sow corn for their use and we will have less complaint of them. Hail storms have been unusually abundant this season, and on the whole the season cold and backward, yet we look forward to fair crops. The war continues to disarrange business, while it may in fact be said to be at a dead halt. The

war has ruined the currency and the currency has ruined the banks, but from the general forbearance of the people to each we shall look to less disastrous results than under ordinary circumstances. Values of all kinds are sorely at fault, and it is difficult to put up any estimate for the future. No one can predict the end, and it therefore behooves each to use the utmost economy in his business and to especially avoid going into debt.

OUR HAIL STORM.—Reader, did you ever own a hail storm or have one pay you a friendly visit, harvest your cereals, cut off your garden vegetables and play all sorts of pranks with your trees and favorite plants? If you have not you are fortunate indeed, but if you have you can sympathize with us. The storm of the 19th, of which a more full account is given elsewhere, done us no small amount of damage. In looking over the farm we count the loss of twenty-five acres of spring wheat in full bloom, a dozen acres of rye just filling out. This rye was sown early in August, and had been pastured, thus demonstrating that we can sow early and pasture and yet grow a fine crop of grain upon the same mode now being practised in Oregon with what is called June wheat. We never saw a better crop of rye, and old farmers here say it was the best that they had ever seen. Not a blade of either rye or wheat is left standing. Two acres of black Tartarian oats went the same way; four acres of navy beans, just ready for the cultivator, were swept off, and have been replanted; melons, squashes, cucumbers and pumpkins gone beyond hope of renewal. Early potatoes, and all early garden vegetables, nearly ruined; corn set back as by a frost, fences blown down and buildings more or less injured; a total loss of fruits of all kinds, the destruction of flowers we may well count in the category of ills. All these, and many more we have to mourn as a farmer, and in which we have the sympathy of the farmers. But when we go into the orchard and find over thirty acres of fine young trees just bearing their first crop of apples, of pears, of cherries, of plums, of apricots, of almonds and of peaches, almost denuded of leaves and fruit, with trunk and limbs sadly marred, we can find few who can fully appreciate our loss. In the nursery we have less to mourn, for by severe cutting back we shall soon make amends, and again all right and fair. We had been ambitious to wipe out the popular fallacy that fruits would not thrive on the prairie, and were in a fair way to do it,

but have now come to a dead halt in the argument, and must wait for Time, that great solacer. to permit us to again resume almost back where we began, and repeat over our work and demonstrations. We feel like the old negro who sat down by the hole in the door where a cannon ball had gone crashing through, "Massa," said he, "two ball no go tro' one hole." So it may be that two tornadoes will not follow the same path, yet it is possible that we, like the old African, may be mistaken.

NEW MUSIC.—We are in receipt of the following pieces of new music from that popular publisher, A. J. Higgins, 40 Clark street, Chicago, Illinois.

"The Little Boy that died;" a very affecting song, the music and words both expressive.

"Down with the Traitors' Serpent Flag;" a new piece just suited to the times. The words are patriotic and the music good.

"The Farmer's Boy;" one of the Hutchinson Family songs, composed by J. W. Hutchinson; an exact portrayal of a farm scene. Every farmer boy should have it.

"Mabel Clare;" words by Rosetta Lunt; music by H. J. Higgins; a sentimental song, and just what it was intended to be, a first rate piece.

Mr. Higgins deals largely in music, and always has the latest publications for sale. Send for one of his priced catalogues. Fathers and mothers should not forget that if

"Music hath charms
To soothe the savage breast,"

It certainly will prove valuable in the household.

We believe in a rigid economy in these times, but not in niggardness. Therefore send to Higgins for music and save money and get that which will be of value. Music is great on the "blue devils," as we have found since the hail storm swept off our crops.

YOUNG'S CULTIVATOR.—This implement we believe generally disappointed the expectations of purchasers last season, the difficulty was in expecting too much of it; in rough ground it is of no value, while in well cultivated, clean land it is a nice thing. Where the land is suitable for it a boy and horse can work eight acres a day and do good work. In garden culture and in the nursery it can be made useful. We hear of none being made, and we presume they will give place to some other new aspirant; not so much from any innate defect in the implement, but like

some quack medicine its friends insisted that it was adapted to all diseases that soils are heir to.

THE VALUE OF THE "IRON ROLLER."—We would almost as soon think of doing without the harrow as without the roller, in fact we do not use the harrow half as much in consequence of having the roller; if we have a rough piece we first roll it to break the clods and smooth it down that the seed may all be placed at the same depth; it is then sown and harrowed, and again rolled; in this way we make a saving of labor and at the same time have our land in better tilth, the seed at the proper depth, and to cap the climax, a better crop. We have taken two sections from one roller making a little over two feet and rigged in a frame with thrills for one horse, and used it wherever the ground is cloddy, especially in the nursery, and find it of no small value. The day is not distant when the roller will be numbered among the implements of every farm as certainly as the cultivator or harrow.

THE CROPS.—In the south and central part of the State the winter wheat is excellent. In the South it is cut. Good judges put the average crop at thirty bushels to the acres. In the centre it is filling out with no appearance of rust.—Spring wheat sown early also promises well. In the north part of the State we hear of less favorable accounts; cold, dry weather has shortened the head, and late rains have tended to rust the leaves, but with favorable weather we shall hope for a fair average crop, even under what now seems a discouraging aspect. Leaf rust is not a serious evil to the wheat crop. There can be no question that the wheat crop will at best be a moderate one at the North, but the farmers there-away should not complain, as they had a most abundant yield last season. The corn crop is backward everywhere—at the North the stand is poor, attributed to bad seed and cold, dry weather, the cut worm and other enemies have also been busy; at the centre and the south it is also backward, but the best stand that we have seen; in fact, farmers have in many instances been through to cut out part of the surplus. The army worm did one good turn by supplying the birds and other vermin with food, while the young corn was coming up. In this section the roller is being extensively used. This allows of more shallow planting and prevents the squirrels from finding the hill until up, and makes it more difficult or rather almost impossible for the birds to

pull it. The rye crop is good. This in the centre is becoming an important crop for *hogging down*—that is, the hogs are turned in to harvest it, and it is taking the place of corn for early feeding. The potatoe crop, so far as our observation extends, is a moderate one. All south of this the oat crop looks fine. On the whole we look for a fair average of farm products from the State at large.

C. D. BRAGDON.—The *Rural New Yorker* announces in its last issue that this gentleman, for a long time connected with the *Prairie Farmer*, will after the 6th July fill the place of Western editor for that paper. Mr. B. is to travel extensively in this and other Northwestern States. He is a keen observer, a ready and graphic writer, and cannot fail of adding materially to the interest of that now valuable paper. We regret that Mr. B. could not have been retained on our Western papers, but we shall have the consolation to know that the readers of the *Rural New Yorker* will be better posted up in Western matters hereafter, and if some of them do not get the *Western fever* we shall be mistaken.

EXTERMINATE THEM!—A work of extirpation was commenced yesterday against those Canadian thistles which thrust their prickly presence into our midst all unbidden and have presumed to take possession of our outlying lands. In the operation a workman “thrust three thousand thistles through the thick of his thumb,” more or less, perhaps the latter. At all events, the pretty, prangly, plaguy, prickly plants were cleaned out root and branch from the surrounding territory where they had begun to “spread themselves.” Served them right—had no business to leave Canada and come here during war times.—*Pantagraph*.

Too great care cannot be exercised in regard to, not only Canada thistles, but other noxious weeds, the common field daisy among them, but the Canada thistle is the chief among them all, as we have often proved when a boy, obliged to go barefoot after the cows, or bind up the small grains, pick up potatoes or pull flax. Down with the thistles we say.

APPLE PARER.—One of our lady readers wishes to know which is the best apple parer. We have used Sargent & Foster's patent for some years with the most entire satisfaction. Probably there are others as good. Those having them for sale would consult their interest in presenting a card to the public.

CHERRIES AND BLACKBERRIES.—Mrs. Fannie Brown is desirous to know the best time to set out May cherries and blackberries. The cherry should be set in the fall and well banked up, or very early in the spring; they do badly when set late, often dying after leaving out. The May cherry is the most hardy of the whole cherry family, bears the youngest, and is the most reliable; it is, in fact, the farmer's cherry. Blackberries should be planted in the fall, for, like the cherry, they start early. Care should be taken to protect them from being thrown out by frost; when liable to this, early spring planting should be resorted to, by getting the plant in the fall and heeling them in ready for use. An abundant supply of the small fruits will lessen the number of children on the sick list during the heat of summer, add to their enjoyment and give to mothers a relief from the most arduous of their duties; better have children picking berries than prostrate in the sick room.

THE “MANNY PRIZE.”—We see by the Premium List of the State Agricultural Society that the enterprising firm of Talcott, Emerson & Co., of Rockford, manufacturers of Manny's reaping and mowing machines have again offered one of their valuable machines as a premium “for the best field of wheat, (fall or spring) not less than five acres, the ‘Manny Prize,’ of Manny's combined Reaper and Mower, \$145.”

This premium is worth contending for. We have used this reaper and mower for the past three years, without having to send it for repairs. They are made strong and durable.

MADISON COUNTY FAIR.—This Fair is set for October 1st, 2d, 3d and 4th, at Edwardsville; President, D. B. Gillman, Alton; Corresponding Secretary, John A. Prickett, Edwardsville.

“On the entry of animals or articles, cards will be furnished, on which will be marked the class and lot in which they are entered, and also the entry number as entered on the books of the office, which cards are to be placed upon the animal or article to be exhibited, and not removed or marked with the name of the owner.”

We did not think that so much old fogysm remained in Madison county as is contained in the above. If you can't trust your committees with the names of exhibitors better leave it to the crowd to decide.

“An animal or article for which no premium has been offered, will be charged an entry fee of twenty-five cents, designated by a red entry card

as miscellaneous, and entered by the entry clerk in the lot to which it seems most properly to belong."

For the life of us we can't see the point in the above. We don't know why a person should pay a fine of twenty-five cents for adding to your show more than you call for in the premium list. Will the Recording Secretary please enlighten us on this point for the benefit of the country at large, who may wish to keep out of the way of your twenty-five cent rates.

"All applications for entries must be made in writing, stating breed, age and pedigree of animals, and owners' name and post office address; for which purpose blank applications will be furnished, which exhibitors will procure, fill and deliver to the entry clerk, and pay ten per cent. upon the amount of premiums contended for; and can enter the same in as many lots as they may choose, by paying the percentage."

Well, we guess you will not draw a large crowd of exhibitors, under that rule.

"Any person attempting to influence the judges, shall be excluded from competition."

That is, we suppose, offering to stand treat or vote for the judges when they next run for office.

"In making awards to animals it is recommended that the judges have no discussion, but that after a thorough examination, they proceed to vote by ballot until a decision is made."

Worse than a jury, for they have the privilege of "discussing."

"Premiums will be paid in money or plate, at the option of the successful exhibitor."

Good, you are right for once.

THE STATE FAIR.—Our readers should not forget that the State Fair will be held in Chicago on the 10th, 11th, 12th, 13th and 14th of September. We hope that railroad companies will not only consult their own but the interest of all interested by selling half fare tickets commencing as early as the 3d and good to the 17th. Men will put off their business to the city to obtain the half fare, and by giving more time they can make their purchases and have time to attend the Fair; otherwise they will visit the city, do their business in the pressure of business and return without going to the grounds only to get their tickets stamped. No return tickets should be stamped before the morning of the 11th; this will protect the railroads, for what matters it to them if the person goes one or six days before the Fair to the city. We have watched the effect of this, and know that it is to the interest of the

roads to give more time. We speak only of our Illinois roads, for of its effect on the Eastern roads we suspect the reverse would be the case except for perhaps a hundred miles or so. The shortsighted policy pursued by the G. W. R. R. last year in crowding the business into a single week, will not soon be forgotten, and other roads should now profit by the lesson.

AGRICULTURAL PAPERS AND THE WAR.—The war is having a serious effect on the whole class of newspapers, and more especially those of a literary and scientific character. The sensation papers of the New York *Ledger* stamp are wiped out, much to the benefit of the rising generation. But the pressure begins to bear on the agricultural press also, and complaints, though not loud, are significant. This week the *Homestead*, one of the best of our exchanges, comes to us the last time as a weekly, and henceforth it will be a monthly at \$1 a year. We regret this, not so much for this change as the cause leading to it, which will more or less depress every agricultural journal in the United States. Those of the South must suspend, while those of the North must live the best they may during the war.—Should the rebellion continue, their circulation, after the first of January, when subscriptions are to be renewed, will be seriously lessened. Some of our cotemporaries are spicing up their sheets with war items, but in this we think they will make a grand mistake; people want all the war news, and the blanket weeklies from the cities will supply this at a cheaper rate. We shall make no change in the conduct of the *FARMER*, and while our armies are crushing out treason it shall be our aim to simplify culture and elevate the Western farmer. We trust that none of our readers will leave us. We want them to keep posted on the progress of the war; at the same time they should not forget that they have a duty to perform in the careful culture of their farms, and as we take a seat at their fireside but once a month we hope that our meetings will not only continue to prove profitable, but cordial.

PERSONAL AND APOLOGETIC.—The delay of this number is the fault of the editor, or rather the fault of allowing his right thumb to come between two ponderable bodies, the one at rest and the other in motion—result: a badly mashed up member, of no value for a time to guide the pen, and even now with difficulty.

PREPARE FOR YOUR CANE CROP.—Now is the time to be getting your arrangements made for cane mills and evaporators. Farmers should not wait until the season comes for working up this important crop before getting their mill and evaporator, as a little delay may lose them the whole crop. The best machinery is always the cheapest. For evaporators, sheet metal is far preferable to cast iron, it is more sensitive to heat and is not liable to crack.

In the evaporator line the truly valuable Cook's Portable Evaporator is held in high esteem. It has given unbounded satisfaction everywhere; has been thoroughly tested by thousands, and it is accorded that it works more rapidly and makes as good if not better syrup and sugar than can be made in any other way. We advise farmers not to throw away money upon experimental machinery. The syrup which took the first premium of \$15 at the last State Fair was taken from a lot of 664 gallons made upon it by Mr. Samuel Murray, of Murraysville. See advertisement on another page.

BUCKWHEAT.—From the 1st to the 15th of the month is the time to sow this grain. Last year the crop was a pretty general failure, and in consequence the seed is scarce and high in price.—Unless you can follow buckwheat with oats we would never advise its sowing. It is useless to plant corn or potatoes after this crop, as a poor crop will follow. We would not recommend the sowing of large fields of this grain in this part of the State. We confess to a partiality for slap-jacks in winter, yet when we have grown a supply for home use we are content. Wisconsin, Northern Michigan and Minnesota is the home of the buckwheat crop. There also the millers better understand it. In fact, so expert have they become, that last year when the crop was cut off they supplied the market from the shorts of spring extras, but after all it was a poor sell, and they would do well not to repeat it.

TURNIPS.—We never fail to sow one or two acres of turnips, and with the exception of last year, have not failed of a crop for several years. We prefer low land, the second or third year after being broke up. Landreth's Strap Leaf and Skirving's Purple Top have been our favorites, the first for early feeding and the latter for winter. The ground should be deeply plowed so as to bury the seeds of weeds; roll after plowing, sow and harrow in and again roll. The rolling

will crush the lumps at a much cheaper rate than the harrow, and without having the land in fine tilth it is useless to sow. We usually sow broadcast a pound of seed to the acre from the first to the middle of July. If too thick they must be thinned out, and all large weeds kept down.

HANDLING OF BEES.—A writer in the *Homestead* condemns the practice of handling the bees by taking out the movable frames. He has a new hive that he says the moths cannot get in, and if they should do so they would fall out without help. That may do with the Connecticut moths, but our kind stick like wax when they once obtain a lodgement.

HORTICULTURIST FOR JUNE.—This work is becoming more and more valuable as the practical and the useful predominate over the intensely artistic, at least so to the Western reader, who is compelled to have an eye to economy. C. M. Sexton & Barker, 25 Park Row, New York, \$2, or \$2 50 with the ILLINOIS FARMER.

FARM PREMIUMS.—The book of entries is now in the hands of the chairman of the committee, and a programme of the routes and time will soon be made up, and competitors for both farms and nurseries will have notice of the time as near as it is possible to make it out. The committee will make their visit at an early day.

THE POULTRY HOUSE should be whitewashed inside and out; change the nests and get, if possible, sassafras poles for the roosts. Throw in gravel and lime or coarse sand for the hens to roll in. Lice are bred in the hen house, and care should be taken to keep them out.

TWO-HORSE CULTIVATORS.—We intended to have said something on this head, but must wait until next month, when we shall take down inventors and manufacturers not less than two or three pegs. The principle is the true one, but such botching is a shame to the age.

THE GARDENER'S MONTHLY, for June, is a valuable number. This work should have a wide circulation; \$1 50 with the ILLINOIS FARMER.

BEES.—Look well to your bees for the bee moth. Ours were neglected for a few days, when one swarm was found nearly destroyed with them.

WATER DRAWERS.—Within the past three years an effort has been made to bring back to domestic use the well bucket.

“The bucket, the old oaken bucket,
“The bucket that hung in the well.”

Several ingenious devices have been gotten up to effect the object, and the well bucket, or as it is now christened the “water drawer” is again becoming familiar, not with the old curb and high sweep, but with wheel and pulley and a movable spout through which the limpid fluid is poured without further effort. A few days since on going to the post office we saw on the sidewalk a neat looking curb containing one of these new fixings, and attracting the attention of a large crowd. To our surprise we found it in charge of a well known brother nurseryman, and who is the inventor. We always knew that there was genius in the craft, but as it is seldom put to good use we were curious to examine his bantling, which he calls the “Eclipse Water Drawer.” We had indubitable evidence, after diving into its mysteries, which by the way were all plain, that it did eclipse all others of its class, by the addition of a contrivance that held the bucket in place, without discharging, only as the operator desired, and then either by the tumbler or pail full. Well, this suits us, and we can again (when we get the “drawer,”) slake our thirst from the rim of

“The moss covered bucket,
“The iron bound bucket,
“The bucket that hangs in the well.”

Those curious to know more of this will address R. W. Hunt, Galesburg. It is the best by far that we have seen of

“The bucket that rose from the well.”

FREAKS OF THE MAILS.—To-day, July 10th, we received a package of proof postmarked Springfield, June 23, 1860, directed to this office, and forwarded from Effingham July 8th, 1861. Isn't this phunny? The package is not travel worn, but has been well cared for. The supposition is that the old postmaster could not read, and that it had been waiting for the school master or a change in the office. It may be that the direction, “Champaign,” staggered the official and he put it in durance for fear that it might spill out and spile something. Well, it is pretty well dried up at this time, and at least innocent of spirits. We prefer the way the old negro distributed the mails, with a shovel, giving each bag a proportion. In this way the matter would

go, but to lock it up a whole year is some. We thank our stars that it was not at the beginning of Old Buck's administration, for then we should have had to wait four years. The noble official can have a leather medal on application. Doubtless one of the same kidney has part of the copy for the February number in his charge, which will come to light on a change in the office.

Mole Draining.

In the June number we pretty fully discussed the subject of mole draining, but the cuts were delayed, which we now supply.

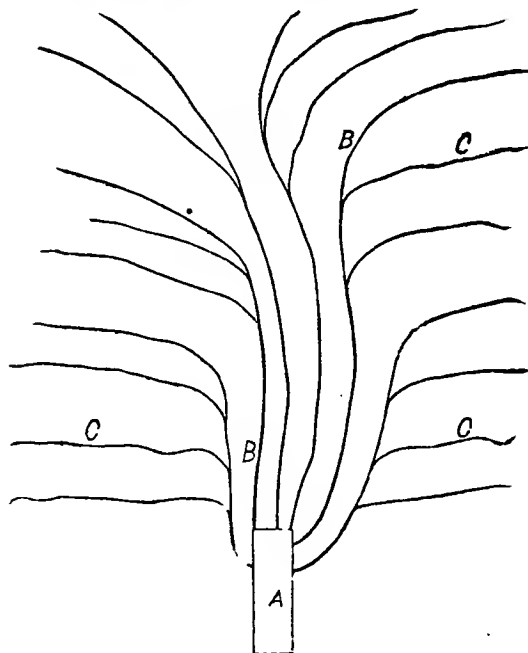


FIGURE 1.

A is the outlet or open drain where the mole drains commence and run up through the lands to be drained. From A to B is the main slough, from which the laterals C lead off to the upland or small depressions, as shown in Fig. 2. In clay soils there is little difficulty in obtaining an abundance of stock water by adopting the plan laid down. In a broad slough one drain is not sufficient, and more or less will be required, depending on the width and length of the drain. A hundred rods, or perhaps more will do to run from the outlet, but it is better to begin back to the open drain than to load down the main drain with too much water. From the want of air these mole drains will not discharge as freely as the tile; and, to obviate this, some recommend air holes or pipes running down at intervals of a hundred rods. If these could be kept in good repair it might be well enough, but this will not often be done. The lateral drains can be made with a smaller mole, which lessens the expense.

For stock water the mole drain is the most valuable, as from the fact that water finds its way in slowly it will be longer in being discharged. We would advise no one to put in one of these drains less than three and a half feet deep.

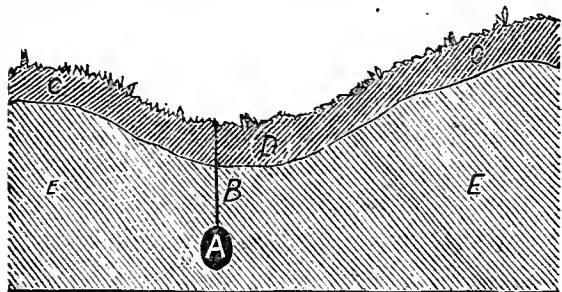


FIG. 2.

This shows the depressions in the upland, and where the drain should be made. A is the mole or ball, B the cutter; the space is filled in by the earth being pressed up into the cut. In some of this variety of mole the bottom is left flat and not pressed, in others the pressure is on all sides alike. As we are promised some practical articles from the pen of an old operator, will await his deductions.

NEW WHEAT.—But little new wheat is now coming in. Prices are too low—opening from 50 to 60 cents. T. R. Dickerson delivered on Tuesday, a thousand bushels at 70 cents, on early contract, but prices range much lower now.—*Carlinville Democrat.*

How to Increase the Size of Fruit.

Prof. Dubrenil, in an article in the *Journal del' Academie d'Horticulture de Gand*, points out some of the operations whereby the size of fruits may be increased:

1. Grafting the trees on a weak species of stock—for instance, the pear on the quince.

2. Pruning so as to deprive the tree of a certain portion of its shoots. By this means the sap which would have been absorbed by the parts cut off, goes to increase the size of fruit. Summer pruning, which has for its object the removal of a large number of shoots by disbudding and pinching, has the same effect.

3. Let the bearing shoots be as short as possible, and in immediate connection with the main branches. Fruit growing on the stem is always larger than that situated at the extremities of long slender branches.

4. Thinning out the fruit when too numerous.

5. Shortening the principal branches at the winter pruning, and checking in the summer the vigorous shoots.

6. Supporting the fruits, so that their weight may not become a strain upon the foot stalk.

7. Moderating the amount of evaporation from the fruit. Fruits covered by leaves are larger

than those on the same tree not shaded. It is necessary, however, in order that shading may not affect the quality of the fruit, to expose it when full grown to the direct action of the sun. To diminished evaporation must be attributed the considerable increase of size which always takes place in fruit introduced into bottles soon after it is set. The mouth of the bottle being closed after the portion of the branch from the dry action of the air, and is constantly surrounded with a moist, warm atmosphere, which keeps the epidermis pliable, and stimulates the growth of the tissues.

8. Moisten the fruit with a solution of sulphate of iron (copperas). One of Prof. D's pupils, by moistening an Easter Beurre pear, from the time it was fairly set, once a fortnight, obtained a fruit so large that it could be scarcely recognized.

9. Ringing the shoot or branch immediately below the flowers. This should be done when the flowers are opening; the longer it is delayed after this period, the less is the effect produced. The incision should penetrate to the wood, and the ring of bark removed should have a width equal to half the diameter of the shoot. The width, however, should not exceed one fifth of an inch, otherwise the wood will not close up.

10. Inserting on vigorous trees fruit buds, with a portion of wood attached. A tree which in consequence of excessive vigor has never produced blossom buds, may by this means be made to produce fruit of large size from the abundant supply of sap which the inserted blossom buds will receive. But it will be necessary to pinch the shoots of the tree in summer, which would otherwise absorb the larger portion of sap, to the injury of the fruit.

"Don't rob yourself," as the old farmer said to the lawyer who was calling him hard names.

—We suppose there is quite as large an amount of craft on the land as there is upon the water.

—Rarey tames wild horses with the use of the strap. Wild boys may be tamed in the same way.

A celebrated preacher in the Southern part of Pennsylvania, announcing his intention to preach in the woods on a certain day, begged the ladies not to bring their children with them, as it was enough to hear "one crying in the wilderness."

An Irishman was once brought before a magistrate and charged with marrying six wives. The magistrate asked him how he could be so hardened a villain. "Oh, please your worship," says Paddy, "I was trying to get a good one."

A western editor says that "a child was run over by a wagon three years old and cross-eyed, with pantalets on, which never spoke afterwards."

—A man that can be flattered is not necessarily a fool, but you may always make one of him.

—It is only those who have done nothing, who fancy they can do everything.

—Few persons are worth loving who have not something in them worth laughing at.

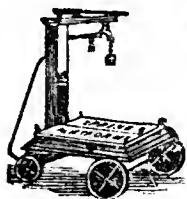
—When is a man thinner than a shingle?

Ans.—When he is a shaving

“Give the devil his due.” This may answer very well for an apothegm, but practically, it would carry off more than the plague.

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TO THE CASUAL READER.—This and other numbers of the ILLINOIS FARMER will be sent to many persons who now see it for the first time. Will they not examine it, and if they like it, subscribe for it, and ask their neighbors to subscribe? Sample numbers, prospectuses, etc., sent free to all applicants. See terms elsewhere.


HOW TO OBTAIN SUBSCRIBERS.—The best way is to send for sample numbers. Any young man by canvassing his neighborhood, can easily make up a club of five, ten or twenty, but no time should be lost in doing so, for your neighbors

may send east for their paper which, though valuable there, is much less so here, the difference of soil and climate putting them out of their reckoning when attempting to teach us western farming.

HOW TO HELP.—The friends of the ILLINOIS FARMER will find a prospectus in another column. We desire to suggest a few ways in which they can use it to advantage. 1. Show the FARMER to those who are unacquainted with it, and tell them what you think of it. 2. Send for prospectuses, and put them into the hands of those who will use them, and place posters where farmers will see them. 3. Get postmasters interested. They see everybody, and are efficient workers. 4. Send us the names of persons in your town to whom we can send prospectuses and sample numbers. 5. Begin now, before the agents of eastern papers get up their clubs. This last hint is especially important. Let us hear from you soon. See terms elsewhere.

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- No. 3—Cut 12 inches, wrought and cast standard right and left hand, single and double shin.
- No. 4—Cut 14 inches, wrought and cast standard, right and left hand, single and double shin.
- No. 5—Cut 16 inches, wrought and cast standard, right and left hand, single and double shin.
- No. 3—Clipper plow; cut 12 inches, wrought and cast standard, right and left hand, single and double shin.
- No. 4—Clipper plow; cut 14 inches, wrought and cast standard right and left hand, single and double shin.
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- No. 3—Cut 12 inches, right and left hand, single and double shin, wrought and cast standard.
- No. 4—Cut 14 inches, right and left hand, single and double shin, wrought and cast standard.
- No. 5—Cut 16 inches, right and left hand single and double shin, wrought and cast standard.
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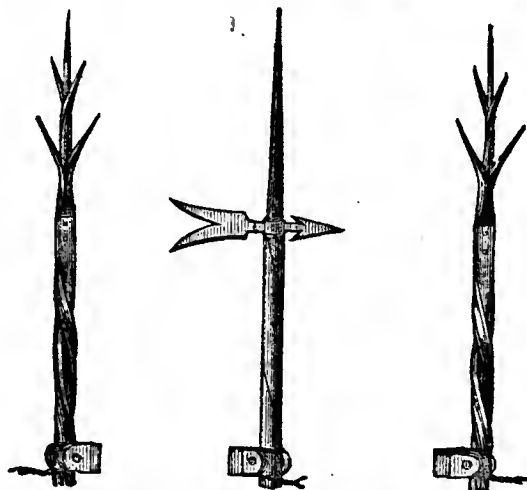
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THE ILLINOIS FARMER.

VOL. VI.

SPRINGFIELD, AUGUST 1861.

NO. 8.

August.

The months continue to wheel into line. On the great prairie slopes men are marching to the music of the reaper, or listening to the buzz of the thresher as it shells out the golden grain. Over all the trumpet's voice is heard in the far distance, and at our very door calling out the hardy yeomanry to do battle for their country—anarchy rules on the plains and river sweeps of fair Missouri and its hydra form must be crushed out. Virginia is one great camp of hostile squadrons, numbering nearly a quarter of a million of armed men. In Kentucky, brother is warring with brother, and the elements of a civil war are fast gathering. The sons of freemen, of free homes, of free schools and of a free press, are gathering for the battle of freedom—the sons of Union against the sons of indolence and disunion—none can doubt the result, and when the sound of the cannon shall cease, when the freemen of the North shall have marched back to their own loved homes, everywhere in the sunny South will go up the shouts of the loyal, who have clung with love to their country's flag, while those who would drag it down shall ask for the mountains to fall on them. Then will labor again become ennobled and the mechanic arts flourish, the ring of the hammer shall be heard instead of the din of war, school houses shall be erected everywhere, and the poor sandhill and "white trash" shall stand forth disenthralled and take their place in the ranks of men, while their sons and daughters shall see through the mist of battle the angel of liberty that is to give them

a place and a name among their fellow men. The genius of liberty and of equal institutions shall spread its protecting wings alike over the genial climate of the South and the more exacting though hardy North. The war is none of our choosing; the industrious North have been content to mind their own business, until their firesides have been threatened with the torch of the invader and all they hold dear of free institutions swept from them; if they delight in the arts of peace; if they prefer their morning slumber to be broken by the music of the birds rather than the "reveille," the sound of fast revolving wheels to that of martial music, it is not that when the stern necessity is forced upon them that they may not rouse at their country's call. With sunbrowned brows and muscles inured to toil, when armed with the deadly implements of war, woe be to the foe that dare stand in their pathway or threaten to invade their homes. Let the contest be short and decided, that the arts of peace and the building up and the beautifying of our homes may have all our care.

Summer has now culminated, and we will soon be marching down the slopes of autumn. The hopes and fears of spring have given place to the realities of ample harvest now and in prospect. The winter wheat has made good returns, while the whole family of small grains give fair promise of ample returns. Of corn and the later crops we must wait the full effects of the August sun to simmer down their juices. The fruit crop is promising, and never before have so many families been gladdened with the delicious

small fruits as this season. It is a good beginning; their sure and easy growth has been demonstrated, and when the season of planting again returns we shall see an increased attention paid to these pleasant and health giving fruits, which have been too long overlooked by the otherwise provident farmer.

The value of timber belts has become better understood, and soon a large share of our prairie farms will be beautified and made more comfortable, by shutting out and modifying the sudden changes that now sweep with such fierceness over the prairie. Under the blaze of the August sun the farmer has the satisfaction of seeing ample harvests gather about him, and were it not for the sound "to arms," we should feel delighted with the glad prospects of the now fast gathering year.

Harvesting of Beans.

Beans are often injured by improper harvesting. If not well cured they mold, and moldy beans, as all know, will not sell. If the weather is dry beans can be pulled and laid on the ground to dry, but even then the night dews and hot sun is not the best, and a much better and safer way is to pull and place them around a stake; the stake should be six or seven feet high and driven into the ground so firmly that heavy winds will not throw them down. The beans should be pulled when the ground is dry and no moisture on them. If the ground is wet, especially in a clay, in pulling the earth will adhere to the roots and the beans will be filled with small lumps of clay that will prove very annoying when you take them to market.—In pulling, when you have a handfull place it with the roots to the stake, and continue a circle around in that manner, the tops being so much the largest they will work in very cleverly, lay on until you get to the top of the stake, when you should tie on a cap of straw or prairie hay to shed off the rain. These miniature stacks can be left for some weeks, and can then be drawn to thresh, or

if you have a barn they can be stored until winter; they should not be put into the hay mow, but on the scaffolding, either over the floor or stable, nor should any hay or grain be put on them to press them down, as there will be danger of molding. It should be borne in mind that the value of beans depends upon a good bright color, for if in the least discolored they bring a much less price, and as they are easily injured by moisture, great care must be taken to keep them dry, at least until they become well cured and thoroughly dried. If pulled and thrown on the ground in fine weather they soon cure, but aside from the risk of bad weather and heavy dews they will shell badly in handling; on the other hand when put in stacks about the stakes, they are more compact, yet not so much so that the air cannot have a free circulation to discharge the moisture.—The beans are thus partially cured in the shade, and in handling do not shell out of the pods so freely; and in case of long continued rains they are little liable to damage. It is but little additional trouble when pulling to place them into stack and the extra labor of putting on the straw or hay cap; but even if this is omitted and the beans well secured about the top of the stake it will do very well. After beans are threshed they should not be put in cotton sacks, barrels or bins, or too late they may be found unmarketable from heating. They should be spread out for some weeks before putting up for market. There is no other farm product that has so wide a range in the market as the bean, sometimes as low as thirty-five cents, and unsaleable at that, and again in demand at two dollars and a quarter; this for first class navy beans, while those a little discolored are always dull sale. This year an unusual breadth has been planted, expecting an unusual demand from both army and navy, and it is therefore of importance that they should be properly harvested, for it is bad for the farmer to take a low price for them, and worse for the sailor or soldier to eat musty beans.

Hints for August.

CORN.

Sometimes on account of a heavy shower the weeds will spring up in the corn field after it is *laid by* and make such a vigorous growth that they materially lessen the crop and are very annoying in the gathering, and more especially if it is to be cut up. On new land the *tumble weed* is often a nuisance in this way, as also fire weeds and the summer grasses. These should be cut out with a hoe. One man can dress out from one to three acres a day, and which will be found a profitable investment aside from keeping the corn field free from a new crop of weeds, which would otherwise fill the ground. Corn fields should be kept clean the entire season.

TURNIPS.

The turnip crop should be looked after the last of this month; they may need thinning, and most certainly weeding out. We know of many farmers who affect to look down upon the turnip with contempt, and many of these same farmers we know do without both milk and butter for a large part of the winter.

WINTER WHEAT.

Many farmers commence sowing this month. All those who sow early in the month we would advise to pasture the crop, no matter how close. The Hessian fly lays his egg this month; they are deposited between the minute ridges of the blade, in the early stages of its growth, and appears as minute redish specks. The feeding and tramping will destroy large quantities of them before the young maggots reach the sheath covering the first joint. Last month we gave our views in regard to the pasturing of this crop. In Morgan and Sangamon counties large quantities of wheat was put in with the double shovel plow by the use of "Turner's drill attachment," we learn that the experiment was entirely satisfactory. So soon as we get a little out of the old beaten path of winter wheat culture, so

soon will we find that this is, after all, a winter wheat country. Its capacity for spring wheat is undoubted, and we would like to see winter wheat take the place of a portion of our corn crop. In this connection we would call attention to the article on "Corn Culture," on another page.

POTATOES.

After the potatoes are laid by, which is at the time of blooming, the weeds should be cut out with a sharp hoe. After this time we continue to pass the shovel plow between the rows to kill the weeds between the hills. In digging potatoes we like to have clean land. It is certainly a shiftless way to let the big weeds cover the potato patch, to double the labor of digging. Rag weeds and tumble weeds delight to show their ugliness among the potatoes.

BEANS.

Large quantities of beans are planted this year, and the crop looks promising. They must be kept clear with the hoe and cultivator. The prairie chickens sometimes do no small amount of damage to this crop, and they should be looked after; a good place for them is the center of a chicken pie. Do not work them when wet with rain or dew.

HAYING.

The cutting of prairie hay will continue not only this month, but until frost or even later; but this late cut hay is of little value. See that the grass is only wilted before it is raked and put in cock; two to four hours in the swarth is abundant time; let it cure well in the cock before stacking. Prairie hay put up in this way is almost as valuable as timothy, and better than most of it put up in the usual way.

THE GARDEN.

The garden should have your unceasing care throughout the season, for it is your great medicine chest, upon which you should rely for good health. No labor will pay so well as that judiciously applied to the garden. The small fruits should be mulched if

they are making a tardy growth from a baked soil, or when it is not convenient to cultivate them with a horse. No small fruit should be set where the cultivator cannot reach it, unless it be strawberries, which can be cultivated with the spade, but not so of currants, raspberries, etc.

FLOWERS.

The hoe and steel rake are the implements with which to tickle the soil about the roots of all flowering plants, to make them glow with gorgeous beauty, though the dahlia is pleased with a good mulch of well rotted manure; soap suds from the wash tub is often useful, if not drugged with turpentine. Flowering plants will now need staking and tying up. Make layers on all such plants as are adapted to this mode of propagation.

FARM HEDGES.

We enter our solemn protest against the cutting back of farm hedges in summer, especially young hedges. Thousands of miles of young hedges have been ruined with the summer cuttings that they have received.—After setting out the hedge keep them well cultivated for two seasons, and early the following spring cut back to the ground, cultivate another season and let it alone, and the fourth year you will have a good fence against all kinds of stock. These hedge tinkers have done enough mischief, don't follow their suggestions. The making of a good hedge is a very simple process, and cheap withal.

SWEET CORN.

The daily use of sweet corn is one of the most palatable and valuable. See that the ears are full grown and thoroughly cooked. It should be planted so as to insure a succession of the crop until cut off by frost.—The evergreen is the best for the late crop, though this season we planted some of this for a late supply, as a peck of seed purchased at a seed store in Chicago failed to make a stand, and on the 13th of this month we put in a supply of the early variety, hoping that it would be in time for use. When a

family are accustomed to the daily use of this valuable food there need be no anxiety on the score of summer complaint, it is its occasional use that renders it dangerous.

The Currency.

We consider it our duty to have a word to say in regard to our currency.

Farmers and newspapers may preach a gold currency until they become grey as rats and then they will find paper money representing this precious metal. Banks have rose and fell, fell and rose, and the whole business of the country has been convulsed and deranged several times within the last thirty years by this same paper money, and if we live thirty years longer we expect to see the same thing occur again. Bankers will continue to abound, speculators and brokers will be no more honest, and the commercial newspapers will continue to play the sensation game, get up bank runs after they have been well paid for endorsing A, B and C's bank as sound and reliable. Produce buyers will go to the banks for funds to purchase the farmer's produce, and the farmers will take just such funds as is offered for their products, whether gold, silver or currency, the same old routine will be pursued. But few men hoard gold at this day, and they will take and pass from hand to hand just such funds as are furnished by the bankers. This we say will be, but we do not wish to be understood as approving of such a course; on the contrary, we have always been opposed to a paper currency as detrimental to the best interests of the country, and though we have never expected to see it driven out, yet we have hoped to see it so far improved as to make it less objectionable. A great proportion of our banks are gotten up by borrowers instead of lenders, and so long as these make it profitable so long will their issues be good, but when they meet with a loss it is at once thrown upon the innocent holders of these notes. Banks secured in part by State stocks and part in coin, with a personal liability clause, are

doubtless the safest with this class of bankers, while bankers who are lenders and not borrowers will always be safe, for if they lose their whole capital no one else is injured thereby. Nearly the whole class of so-called savings banks are a swindle on community, from the Dyott swindle down to the lowest batch of sixpenny depositors. It is astonishing what confidence our people put in the cabalistic characters, B-A-N-K—with us it is more nearly synonymous with swindler. Four times within the past twenty years have we had our little all of deposits of current funds closed in with the words "bank shut;" in most cases we have ultimately recovered the amount, but always at a great inconvenience. In addition to this, fives and tens have lost their value in our hands by the act of some swindling banker. We have made it a practice for some years past to keep the stuff moving, and not sleep on anything less valuable than the coin itself. Our German friends are more wary in regard to what they take in exchange for their products, and generally turn their currency into coin at the current rates of exchange, and more especially if they are preparing for some distant payment. A few dollars lost in this way often proves a large gain; certainly they run no further risk of depreciation. We would advise our farmers to always take home the coin, if they do pay a small premium for it, it will always be safe and will purchase goods better than the paper, though nominally at par. No one should touch any paper money unless it is promptly redeemed or can be easily and cheaply converted into coin. Our Illinois banks were conceived in sin and brought forth in iniquity, yet much of the late disaster was caused by the unrelenting war of the newspapers upon their issues. The Wisconsin banks were no better, yet the course of the press in sustaining them, and an honest determination to make them better, will ultimately carry them through the trial. A large number of our own banks are equally good, but like the frog in the fable they dare not put

their heads above water. If by sweeping the whole race from off the earth would give us a specie currency we would say amen to it and cheerfully stand our share of the loss, but of this we have no more hopes than of putting an end to drunkenness; both are evils fastened to our social system that we can only partially muzzle, and the only way is for each individual to keep out of the way of their bite.

[For the Illinois Farmer.]

To Preserve Specimen Fruits in Brine.

ED. FARMER—*Dear Sir:* Your favor is at hand, and I take pleasure in giving you my practice in regard to the preservation of specimen fruits in brine. I take a bucket, tub, or other convenient wooden vessel, put in my fruit and fill it nearly full of rain water; I then spread two thicknesses of cloth over it and lay on salt, which is renewed from time to time, until the brine is almost as strong as it can be; in fact, the stronger the better. The peaches are transferred to jars, and the brine put on them. If the brine does not appear strong enough I put into the jar a small quantity of salt.

In sealing up the jars use two thicknesses of cloth dipped in melted beeswax and resin, put on hot, over which the cover is pressed on firmly without any regard to air in the jar. The peaches being under the brine, of course the air cannot reach them. It requires from four to five days to have them well cured before sealing up.

Yours truly,

CLARK CHATTON.

Payson, Adams Co., July 7, 1861.

REMARKS.—Visitors at the last State Fair will remember the fine show of peaches presented by Mr. Chatton. These fruits retained their original beauty and plumpness. Mr. C. has promised to give us instruction in regard to his discovery, when we visit him, which we intend to do soon. A more ready way to make the brine would be to dissolve the salt in hot water, let it settle and pour off, when it will be ready for use. We would suggest this mode as a decided saving of labor. In this way fruit could be at once put in the jars and filled up with the brine, a supply of which could be kept on hand ready for use, and as the brine is absorbed by the fruit the jar can be filled up, though not to be filled up until the fruit is cured, or simply saturated. Salt

and brine has a tendency to shrivel up the fruit, but the specimens of Mr. C. were plump, as if just plucked from the tree. Should this process prove as valuable as it promises it will prove a large saving in expense, as brine is much cheaper than alcohol; besides, alcohol has the bad quality of discharging the color, while the brine retains them. If brine will do for peaches we see no reason why it will not preserve as well all the early fruits, both small and large. We hope it will receive the attention of our fruit growers.

Ed.

[For the Illinois Farmer.]

Large English Morello.

ED. FARMER—*Dear Sir:* I am glad to have so good report from you of the large English Morello. I regard it as next to the Early May, the most valuable cherry for the West, and I made it second to the May only because it is later in ripening. It is equally hardy and productive, and though usually accounted only a cooking cherry, is when fully ripe a very good desert fruit. It is not ripe when red, or even when of a dark red, as most persons would suppose, and using it then would be disappointed with its flavor. When fully ripe it becomes much larger and is nearly black, flesh dark purplish red, tender and juicy, the slight astringency before discoverable nearly or quite disappears. This variety is not common in this country but as it becomes known will grow in favor. It is perfectly hardy in Wisconsin, seldom failing to produce a full crop of fruit. Is esteemed here also by those who know it, and will, I feel sure, prove valuable in Illinois.

Of a large number of sorts in our specimen grounds, this is I believe the only variety which has near a full crop of fruit the present season. A severe frost on the night of 2d of May cut off most of our fruit and nearly all our cherries, this variety though standing in a row with others and equally exposed was seemingly uninjured.

A tree of slow growth makes an admirable dwarf.

A. G. HANFORD.

Columbus, Ohio, July, 1861.

—The cherry crop with the ordinary varieties is certainly a very uncertain one in this State as well as throughout most of the Western States, and it is therefore of no small importance, if we can, out of the extensive list, select something that will prove satisfactory, even if nothing more than a cooking cherry, for the cherry comes at a

time when fruits are not very abundant. For some years we have found the Early May hardy and productive, though somewhat liable, like other varieties, to the rot. The only tree of the English Morello that we have has been so often removed that it has not had a fair chance, but we have considerable faith in it. This year the frost of May 2d nearly destroyed the fruit, though not entirely, while on all others except the May not a cherry was left. The Carnation and Reine Hortense, of which we have six trees in our specimen grounds, and of which we had begun to entertain some hopes, went with the rest, though the trees are yet in good condition. Some persons continue to consider the Early May and Early Richmond identical, but this error we have before pointed out. The Richmond has a more upright, round head, similar to the Belle de Choisy, while the May is a spreading, flat headed tree, quite distinct. The foliage also differs in color and form, and like the Richmond the stem adheres to the stone, and which will generally draw out with it which is not the case with the Morello. We are more particularly anxious that the Morello succeed, from the fact that it is later, as it does not ripen until the May is out of market. With these two cherries we can get along pretty well, if our farmers will put out good beds of strawberries, with a good supply of currants, Houghton and Pale Red gooseberries, to be well flanked with raspberries and blackberries, among which the Black Cap and Purple Cane shall have a prominent place. Mr. H. is one of the owners of the Columbus Nursery, and one of the most observing and careful of our fruit growers; a long experience in Wisconsin has given him the opportunity to test the hardiness of varieties; in addition to this he has made annual excursions into our State, and thereby become acquainted with its adaptation to fruits. Our readers can therefore place great confidence in his opinion.

Ed.

—We are sure to be the losers when we quarrel with ourselves, for it is a civil war, and in all such contentions triumphs are defeats.

—An Irishman caught a hornet in his hand, but dropped it and exclaimed:

"Be jabers, what kind of teeth do your birds have in Ameriky?"

—Man is the only animal that is doomed to the drudgery of forever carrying pans upon his knees.

—If time is money most people have a good deal more money than they know what to do with.

The Corn Crop—Two-Horse Cultivators.

With the present and prospective price of corn we are under the necessity of considering whether we can continue to grow this staple, to be shipped in its raw state, or to state the case more plain, can we afford to ship corn as at present, or must we be confined to the amount that we can put into beef and pork, or use otherwise on the farm. During the year 1860 there was received at Chicago alone fifteen and a half millions of bushels of corn, and since the first of November of the new crop nearly nine millions of bushels; and this is but a small part of what has gone into Missouri, Kansas, south by the way of Cairo and east by the various railroads. It will therefore be seen that an aggregate of over twenty millions of bushels of the crop of 1860 has gone forward, producing to the farmer an average price of say twenty cents a bushel at the depot in the car, or an amount in round numbers of four millions of dollars. It is true this price, on the average, has not more than paid the cost of production; and now with the average price reduced one-half we may well feel staggered at the prospect.

Most people charge this condition of things on the present hostile state of the country, but we judge this has less to do with it than many suppose. We think there is a more serious difficulty in the way, and one that will remain after the country is again at peace. It is now evident that the South was preparing for this condition of things when they purchased so heavily last winter, and now the stock of corn is so abundant at Memphis and at New Orleans that sixteen cents would be all that could be paid for it here, to make it nett the present rates South. The railroad rates has it is true enhanced the price to the Atlantic seaboard towns, but otherwise the price of corn is not high at the South. Under present circumstances corn will not pay at less than twenty cents the net cost of its production; it is therefore evident that at that price it will cease

to be a favorite crop for shipment. On the four million dollars received for corn, to the demise of "stumptail" there must have been a loss of at least a million of dollars, while at the present rates on that to go forward there must be a loss of over two millions more. The two sums will doubtless sink all the profit to the farmer on beef and pork made from the last corn crop. On the whole the immense crop of corn for the year 1860 will no more than pay the expense of its production and harvesting, so far as the farmer is concerned. The railroads have been extensively benefitted as well as the commission men, while the corn merchant and banker have suffered loss. Many of our county banks have gone under, loaded down with corn, or the notes of corn dealers.—Some of this is a loss direct between the price paid and at which it was sold and a part by withholding the funds by southern correspondents. Another evil that the corn trade begat was the purchase of stocks to extend the banking facilities, under the specious plea that more money was needed to move the crop. This, then, is the true position of the crop of 1860, to sum up an immense crop barely paying its cost to the producer. Now if this is the case under such favorable circumstances, to which we should have added that the pork market was bare, that the supplies at the South were exhausted, requiring a large extra amount to supply them, and which in a great part was obtained before the blockade, we may well enquire what will be the case with the crop of 1861, which though much less, yet promises to be more than an average one. It is certainly no object to grow corn at less than twenty-five cents delivered at the depot, or say forty cents in Chicago, unless by improvement in culture its cost can be reduced. This we think is capable of accomplishment and that five cents may be safely counted upon. This will put it at thirty-five cents in Chicago, a price which we venture to say is the lowest that will permit of its profitable production, and one that will bring to market any large

amount of this important staple. We do not mean to say by this that the culture of corn will not continue a profitable branch of farming, for there are other uses to which this crop is put, besides shipping in a bulk, and that so long as beef and pork are used, so long will corn continue the most profitable feed to make them, and in many parts of the country it will continue the staple feed for farm teams. To supply these demands will require an immense amount of corn—not so much as at present, it is true, yet an amount that will continue to give it a place among the great agricultural staples of the day.

SUBSTITUTES FOR CORN.

The extensive use of kerosene in place of alcohol, for lights, and the substitution of lager for whisky, has cut off two great sources of demand for corn. An improvement in the wine crop has also lessened the demand across the water, where highwines went to make up the deficit in the product of the vine. In fact, the distillery was the great seething cauldron that absorbed the corn crop and maintained its high price, and unless some new demand shall arise, we see no good reason for a change, only in the reduction of the quantity grown. With the low freights and improved modes of culture the East cannot compete with the West in this great staple, and we must soon have the monopoly of its growth, but whether it will then be any great object is yet to be determined. The war is not the sole cause of the low price, for outside of that the causes before noticed had sapped the foundation upon which the demand rested. Cheap alcohol is busy adulterating the kerosene, but this will soon come to an end. The war will increase the demand for wheat and oats, and to that extent lessen that for corn. It is possible that the use of hot air in drying may make it more valuable for European shipments, but of this we have little hope. That it will continue the great staple for domestic use there can be no doubt, but as an article of

commerce it must be confined to those points that will produce it the cheapest. The discovery of coal oil and the oil wells will lessen the demand for corn many millions of bushels annually, and throw out of use that dangerous compound of alcohol and turpentine, which in spite of its explosive character had become, on account of its valuable illuminating quality, almost a necessity.—Lager beer, instead of whisky, has become the national drink, and of course to that extent decreases the commercial demand for corn. The making of domestic wines and the disuse of wines fabricated out of whisky is another drawback to its commercial value. The wonderful extension of the spring wheat crop by supplying cheap flour to the masses has made another permanent inroad into the corn crop. The culture of winter wheat is also being better understood, and its production is not only increasing, but being cheapened will displace so much corn for food.—The sowing of rye for fall pasture and using the crop for “hogging down”—that is, allowing the hogs to do the harvesting—is a new item in the pork line that is rapidly trenching on the domain of corn. Rye, after becoming ripe, will fall to the ground and remain sound for months without sprouting in the ear, thus making it a valuable feed, and as hogs fatten much faster in warm than in cool weather, the rye by giving an early feed has the advantage; it is true that old corn will do the same, but this must be fed daily, while the rye is at all times ready, and at the same time makes a good shade for the lazy porkers.

It will thus be seen that though corn, like cotton, may claim to be king, yet it is being shorn of much of its power and prestige.—Like all coarse staples, there will be times when from the failure of other crops it will command a high price, but in its permanent position on change it will hereafter occupy a less important place. We have no great regrets on this score, for other products will supply its place, probably as profitably as corn. The real difficulty lies in making the

change, for farmers are generally slow in these things, and have a fondness for the old and long tried beaten paths.

TWO-HORSE CULTIVATORS.

The first object is to cheapen the culture. So long as the margin of profit was large, and as corn held the monopoly, it mattered less how, or with what it was cultivated, but now when the margin is small, if not doubtful, it becomes us to use every effort to cheapen its culture, for five cents saved in culture is five cents profit or so much less of loss.

It has been sufficiently demonstrated that with a properly constructed two-horse cultivator, that the quality of the work is superior to that done with a single horse, while in addition the two horses will do more than if worked singly and at the same time save the labor of one man—that is, two horses and one man can work eighty acres as easily as two men and two horses. We will suppose the corn is worked four times, at four acres a day with a single horse, and we have a saving of forty days, which for wages and board, including bad weather, is not less than forty dollars. This, if the crop averages 40 bushels to the acre, is about one and a fourth cents per bushel on the crop of eighty acres, or half a dollar to the acre; but in addition to this we have no doubt that the crop will average five or ten bushels more; nor does the difference stop here, for with this kind of cultivator the crop is drilled in, which will make a saving first on the cost of the machine for drilling over the planter, and second, in marking off, and in the saving of the extra hand to check off the hills. Another very important point is that by drilling the planting can follow the plowing, instead of waiting until a whole field is plowed, harrowed and marked off. Here, then, is a continuous advantage from the beginning, and which cannot at this time be overlooked, if we have any regard to the profits of corn growing. Under this process we think four workings are better than five under the old. We cannot put this difference

at less than five cents on the bushel, which at the present selling price is no small item. If corn will barely pay at twenty-five cents under the two-horse system. That is, we would rather grow corn for twenty cents, under this new plan, than twenty-five under the old. When corn was worth fifty cents the profit was so large that it could be worked with almost any implement and yet prove satisfactory, but now when it is selling below cost, one of three things must occur: a rise in price, the cheapening of its culture or an abandonment of the crop for commercial purposes. Of the two horse cultivators we have already a large variety of patterns, all of them more or less valuable; some of them with seats for riding, some to be guided with a lever, and others in the ordinary way of cultivators. None that we have seen come up to what they should or will be.

We have one, with rollers to crush the lumps, which we look upon as a valuable feature, but the cost of it and the imperfect manner of its construction will not allow of its general use. With this cultivator we can work any drilled crop, however small, when the land is in good order, doing better and more work with two horses than by any other mode, and still we would not recommend it for the reason given: too complicated, too expensive and too frail. Its first cost was fifty dollars, full twice what it ought to be. The rollers, the cultivator, and the shoe to protect the young plant from being covered with clods and earth are all properly conceived, but the arrangement of the parts are all wrong, lacking cheapness, durability and ease of handling. The skavering knives that formed a part of the machine we have laid aside as useless; the guiding apparatus, which was cumbersome and liable to get out of order, has been abandoned as unnecessary, and we would strip the thing of all its expensive gearing, place the cultivators on a solid frame, to run on cast rollers like the sections of a common field roller, say not over two feet in diameter. No farmer who

cultivates eighty acres should be without a good cast roller, and as these are made in sections of a foot each two of these sections would make admirable pulverizers to precede the cultivators, and thus lessen the cost of the implement. What we want is cheap well constructed implements. They must, in the first place, be simple in their arrangement, not liable to get out of order, and to be made strong and durable. A large portion of our implements are worthless from these defects. It is time that we had a change; in fact, as the price of corn compels it, in regard to cultivators, inventors and makers will thank us for pointing out the necessity of a change in this respect. So far as we can learn the number of any particular form of the two-horse cultivators made have been limited, no one being willing to risk a large amount on the experiment until their practicability was more thoroughly tested. This is now settled in their favor, and we will now see who will get up the best and cheapest one. One of our neighbors had an old wheat cultivator made for the purpose of putting in wheat. The wheels were some twenty inches high, with an apparatus for lowering and raising the teeth. It was made for two horses and contained seven teeth. He took out the middle tooth, fastened a common chair to the frame on which he rides and drove it into the corn field at the rate of eight acres a day, doing most excellent work. As a machine for cultivating wheat it was of little value, but for its new application it will rank among the first, for it has adaptability and strength.

Fall Plowing.

So soon as the small grains are taken from the field it is time to begin to consider the importance of fall plowing. Seeds of weeds at once spring up, and if they are now turned under an after crop of seeds will be prevented, the land will become areated and in much better condition for the next year's crop. When corn is intended to follow, the stubble can be turned under shallow if spring

plowing is to precede the planting; if not, a good deep furrow should be used. Fall plowing for corn has not as yet become a favorite on account of the early start that it gives to the weeds, but the day is not distant when fall plowing for corn will be as popular as it now is for spring wheat. In this case two small shovel plows can run ahead of the planter to destroy the weeds in the row or drill, and the other can be taken care of at the time of the first working. It is often the case that a wet spring, like the last, puts back the plowing for corn, and the crop is got in late. Now, if the land had been fall plowed the water could more readily soak away and the sun would sooner warm up the plowed than one covered with stubble, that would reflect rather than absorb its rays. The water from all undrained clay and clay loam soils must be evaporated, and this will be the more readily accomplished when the sun's rays are absorbed.

When stubble land is plowed early it produces no small amount of fall feed, which is valuable at that season. The sooner land is plowed after harvest the better, the stubble becomes rotted and the soil in fine tilth.

Corn land that is clear of weeds will not pay for plowing, if sown to spring wheat, but if well set to biennial weeds it should be plowed without fail. In the fall the teams are in fine condition for work, and as the soil is not full of water, is easier turned over; it also prevents so much crowding of the spring's work. In the spring of 1860 we had ample time to get in the crop, make gardens and look after the orchard, but in the spring of 1861 the spring work was not completed until late in June; had a large share of the land been plowed in the fall of 1860 the case would have been different, and the fear of frosted corn would be less prevalent than at present. In the north part of the State this matter is pretty well understood, but in the center is only being introduced, while in Egypt the thing is scarcely thought of, and it is there we see the worst farming

and with the smallest average return per acre, while it is claimed that Egypt has the advantage in soil and climate; but they allow the less genial north to beat them in the profits of farming. That fall plowing has much to do in this case we are quite positive.

[From the Country Gen'l man and Cultivator.]

Something about Lightning and Protection against its Dangers.

In the old time the question was asked, in allusion to the importance of man, "Can'st thou send lightnings, that they may go and say unto thee, were we are?" Through long ages, this rebuking query was as unanswerable as when set down in that beautiful chapter of a sublime book, the 38th of Job. But our fathers were enabled to inscribe upon the monumental tablet of Franklin, "*Eripuit fulmen coelo*"—"He snatched from the sky its bolt!" and, in our times, the genius of a Morse has, under Providence, solved the terrible problem propounded to "the most patient of men," and given us to return to the reproving interrogatory, in all its piety, an affirmative reply. The imagination is feeble to shadow forth, even in dimmest outline, the wonders that shall be disclosed, when man, advancing in science, and sounding the depths of that vast sea of knowledge upon whose beaten shore he is now but picking up a few curious pebbles, shall fathom the mysteries of the occult, explore undiscovered realms of wisdom, and learn the character, the action and the value of that subtle and potent agent which we call atmospherical electricity.

Without any claim to originality, novelty, or a profound philosophical view, we purpose in this brief, and it may be superficial article, to group together and present in a popular manner, a few of the leading truths, and a few of the interesting phenomena of lightning. Scattered and isolated facts constitute the greater part of what we know concerning the subject. The scientific world is as yet only in the alphabet of knowledge, at least respecting this agent; and, therefore, it need not be expected that the unlearned shall possess anything more advanced.

Electricity, we assume to be a subtle fluid, filling all interplanetary space. The following seems to be the most satisfactory theory of the thunder storm. The earth is a very perfect conductor. The aerial covering which surrounds it is a non-conductor. A cloud consists in the upward motion of a mass of moist and heated air, vapor of which is condensed as it ascends into the colder regions, thus forming a high perpendicular column of partially conducting material. A thunder cloud is shaped like an hour glass.—The earth is negatively electrified. Its induction is intense, and hence the upper end of the column before mentioned, becomes negatively electrified, and, the natural electricity of the conductor being drawn down into the lower portion, this becomes positively electrified. From this portion are drawn, by induction, the explosive discharges to the earth, and so something is said to be

"struck by lightning." A tall tree, a steeple or an elevated rod, presenting to the passing cloud nearer inductive points, are more apt to receive discharges than objects nearer the surface of the earth; but if an object of less altitude, being a better conductor, be alongside a taller one, being a poorer conductor, the discharges will seek the better conductor as against the taller, and will desert the poorer for the better. As, if a man be standing beneath a lofty tree, the top (particularly if it be raining, water being a good conductor,) will attract the discharge to itself, but the lightning on its passage to the earth will forsake the tree, diverge to the body of the man—the better conductor—and pass through it to the ground.

The forked appearance and zigzag course of lightning are owing to interrupted conduction, produced by the drops of rain distributed through the air.

The smoke and heated air which ascend from the flue of a chimney, being of a conducting capacity, increase the liability of a dwelling to danger from the bolt of the thunder cloud. Many years ago a farmer near Greenbush raked and piled together large heaps of brush and rubbish, and set fire to them. It was in the summer season. As the piles burned, the columns of flame and smoke ascended above them to a great height in the sky. The air, rushing in to supply the upward current, assumed a rapid rotary motion, accompanied by a loud roaring noise and discharges of lightning of sufficient magnitude to frighten the laborers from the field. This phenomenon we readily explain. Yet mark how contrary to our theory is the vulgar practice in Romagna, where immense heaps of straw and other combustibles are prepared in the fields, and lighted on the appearance of a storm, to *disperse* it.

We hear the housewife say, "the morning's milk is sour, it has thundered so to-day." Undoubtedly a vast weight of testimony goes to prove that lightning has something to do with curdling milk, souring beer, and changing wine. It is supposed by some that the acidity produced is a result of the tremor occasioned by thunder, but by others that it is the effect of the nitrous acid gas evolved by the decomposition and recombination of the atmosphere, and which many maintain causes the peculiar smell recognized when lightning has struck.

Barns and stacks, exhaling more or less vapors which add to the conducting power of the air, are for this reason liable to be struck. Flocks of sheep and large numbers of horses or cattle, gathered together, are also much exposed, in consequence of the column of exhalations which rises above them. When a charge of electricity passes through a drove or a number of animals in a line, it is observed that the first and last of all the row, alone suffer from its effect, those standing midway often experiencing no injury has whatever. It would seem, too, that this fluid a predilection for white over other colors, inasmuch as cases are recorded in which oxen that were struck had all their white hair singed off, while the red showed no signs of the visitation. The kind of clothing worn by men has been sup-

posed to have an influence, and it is related that of three priests walking together when struck, the one clad in silk escaped, while the other two, wearing linen and woolen, perished.

We remember that in our native town during a thunder storm, a discharge struck a shock of oats in a field with such power as to consume every sheaf on the spot, although within a few rods were tall trees and other objects of considerable altitude, and although the shock was perfectly dry, as was evident from its combustibility.

In the same vicinity we have been credibly informed, a man was standing during a thunder shower, upon the stoop or piazza of his house, when the dwelling was struck, and the fluid passing down the column against which he was leaning, deserts the wood for his person, passed down his side, tearing some of his clothing, and out beneath his feet with such force as to burst off the sole of a new, heavy shoe worn at the time. The story is too well authenticated to be doubted. Now, who can explain this phenomena? Why was not the man killed? Yet stranger still, it is said that when the theater at Mantua was struck in 1784, the electricity melted ear rings and watch keys, without wounding those who wore them.

The precautions against lightning, which have from time to time been proposed, are as numerous as some of them are ridiculous. A highly interesting paper on this subject, by Prof. Lovering, of Harvard, appeared in the American Almanac for 1856. The reader would, we think, thank us for condensing and reproducing much of the matter contained in the article. The superstitious and ignorant notions of the ancients are especially amusing. The Romans thought seal skins a defence. The Thracians shot arrows in the air to threaten away the thunder. The Hyperboreans discharged at the cloud iron pointed darts. Artaxerxes believed that two swords planted in the ground dispersed the clouds. In the time of Charlemagne, poles were used to disenchant the storm; but, unfortunately to any who trace to this the origin of the lightning rod, they were not supposed to possess any efficacy till bits of magical paper were, after due incantations, properly fastened upon their summits.

The lightning rod is by general consent the invention of Franklin. Its value and utility are well settled, some casuists in philosophy notwithstanding. Lightning directs itself to the highest objects; as a general rule prefers metals, wood or other substances; causes no injury while passing through metal; and it by this conducted to the moist ground, expends itself harmlessly in the great reservoirs of the earth. An elevated pointed rod by its powerful induction diminishes the intensity of the lower part of the cloud, and thus lessens the number of explosive discharges to the earth; while if a discharge does take place, it will be attracted from a certain distance around the rod and be transmitted innocuously to the ground. The shape, construction, material, mode of erection and particular action of the rod, we shall discuss in another article next week, when we shall be able to devote more space to certain supposed improvements.

The examination of scientific questions, and the observation of natural phenomena, even of

an ordinary kind, while they increase the sum of our knowledge, tend also to quicken our perceptions and to enlarge our conception of the infinite wealth of the mental world, "all the hoarded treasures of the primeval dynasties, all the shapeless ore of its yet unexplored mines."—Such investigations and such contemplations also tend to increase our veneration of that eternal One who governs the universe, who divides "a water course for the overflowing of waters, and a way for the lightning of thunder," who brings forth Mazaroth in his season, and who guides Arcturus with his sons.

Oak Ridge Farm, 1861.

HAMPDEN.

An Unofficial Look among the Farms and Nurseries.

Having been appointed a member of the committee to award premiums on farms and nurseries, we shall take occasion in our visits to give an unofficial account of what we see and hear.—Of course, we shall make an official report to the proper officer of the State Agricultural Society. As a member of the committee it will become our duty to make the awards, not because the person excels in farming, but to the best among the competitors. Now, even the best of these may not be above the mediocrity of farms; they will of course be graded first and second according to their respective claims. In our unofficial notes we shall treat the subject liberally, set down aught in malice or give any undue praise. Our aim shall be to give a daily history of what we see and hear, whether on premium farms or other less ambitious premises. These notes will form no part of our official report only as facts incidental thereto, and the other members of the committee will neither be consulted in regard to them, nor in any manner responsible for either the matter or the manner. If they are personal, as of necessity they must be to a large extent, all we have to say is that the persons competing become public property, and thus advertise themselves as par excellence the best farmers and nurserymen in the State. They of course cannot complain if a true account shall be given of the condition of their premises should they fall short of good cultivators, for on the other hand if they excel they will have the advantage of an extensive free advertising of their skill. The object of giving these premiums is to arouse public attention, not only to the profit of farming, but to make it a pleasant and desirable pursuit. System, convenience, order, symmetry, a commingling of the useful and the beautiful, are the leading features sought for. The society will be at a large expense in making these examinations;

the members of the committee give their time, and if nothing but the laudations of this or that man is the object, both money and time will be thrown away; but we do not apprehend that the committee will have any such lax views, but will without any hesitation throw out from competition any unworthy subject. In this trip, which will embrace a large portion of the State, we expect to meet many of our readers and to glean a large amount of practical information. It is not probable that a full report will be ready for this number, and we shall continue the subject in our next. Should we tread on any tender toes or commit any error, our pages will be open for correction. We shall carry the mantle of charity with us, for being a farmer and nurseryman ourselves, we know the drawbacks which attend the calling.

Leaving home on the 22d July, in passing south we find the small grain nearly all harvested, now and then a stray patch of late oats still remains. Quite too large an amount of wheat is yet in the shock, suffering daily loss from the exposure to sun and dews. The corn crop looks very fine, though later than usual until we reach the basin of Upper Egypt at Neogo, thence south to Tamaroa, the crop is both late, small and a poor stand. We met Mr. Hull, another member of the Farm Committee, at Centralia, Mr. Chase, of Chicago, not arriving. Tuesday morning, the 23d, Mr. Yates found us at the hotel at Tamaroa and drove us to his place, which is about two miles distant to the southwest of the village. The general character of the prairie hereabouts is almost level, and the soil a light, chalky one, easily dissolved in water, and in the wet season forming a perfect mortar bed, almost impassable for teams. The site of Mr. Yates' farm rises from this level prairie in an oval form, sloping to all points, and is some twenty feet in the center above the surrounding level. In the general upheaval this point was undoubtedly thrown thus above the plain, for the sandstone, or silicious conglomerate underlying the upper coal strata, is within twelve feet of the surface at the apex of the mound where the house is located, and the well is sunk into this sandstone some forty-five feet, where an abundant supply of water is found, from which the lime is tolerably well filtered by the sandstone. The farm contains two hundred and twenty acres, all prairie, and distant from the timber about two miles to the north and west. The site is a delightful one, from which you overlook the prairie on all sides. The prairie is but a few miles in extent, but contains several simi-

lar elevations, all of which are vastly better adapted to fruits than the flat prairie, for from these miniature table lands the cold air can roll down to the lower level and thus produce frost, while on these the fruit would measurably escape. The apple and most of the peach orchard occupies the north and northeast side of the slope, while the dwarf pears that to the northwest. So regular is this slope that the surface water can be led either to the north or the west, at the pleasure of the cultivator.

In entering the pear orchard from the east we first came to one hundred White Doyennes, fine thrifty trees, with a moderate crop of fruit, some trees quite well loaded and others with none, or but a few specimens. The next rows contain two hundred Bartletts, containing a good fair crop, many trees bending with the weight of fruit, and all making a good show. On many of the trees in the orchard we observed strips of tin, which Mr. Y. informed us was for the purpose of keeping off the crows that otherwise would destroy the fruit as fast as it ripened, but these tin strips kept them at a respectful distance, and the crop was thus saved. Twenty-five trees of the English Jargonelle were not doing well, and gave us an unfavorable impression of their value. The next in order was one hundred and sixty-five Stevens' Genessee; trees fine, but no fruit; last year they had grown a bountiful crop. The above trees had been set in the spring of 1857, of two year old trees, while the remainder of the orchard was set at the same time, of three year old trees. These latter were much the largest, apparently more than a year's difference, and we can only account for it that they were originally much better trees when taken from the nursery. The difference between first and second class dwarf pear trees is a wide one, and one that tree planters should be careful to regard.—A hundred Buffum's loam up like Lombardy poplars, healthy, vigorous trees, with a few specimens of fruit. This variety is not a young bearer, but will probably give a better account of itself some half a dozen years hence.

Twenty-five Seekels are thrifty and contain fine specimens, though not abundant; among them we found a single specimen badly cracked, the only one that we saw in the orchard; the tree was thrifty and contained about a dozen other specimens, all fine. Twenty-five Summer Virgalieu trees, not thrifty, yet presenting quite a show of indifferent fruit. Twenty-five of B. d'Arenberg, very thrifty, with a few specimens of fruit. One hundred and twelve trees of the fa-

mous Dutchess d'Angouleme, fine trees, but sparsely fruiting this season, last year having borne abundantly of most superb fruit, as all who visited the State Fair at Jacksonville can testify. This is Mr. Y.'s favorite variety. Ten of the B. Goubeault have not done well. Seventy-two of the Beurre Brown are without fruit. One hundred and twenty-five of Beurre Diel are magnificent trees, with a moderate show of specimens. Two hundred and twenty-five of Vicar of Winkfield, good trees, with a moderate supply of pears. Forty one of the old Summer Belle, with their strong shoots, are herewith greeted with pleasure for "auld lang syne." Last year the fruit of these was ripe July 4th, but at this time just ready for house ripening. This fruit should always be picked rather green and house ripened, or it will otherwise rot at the core. One hundred and fifty of the Glout Morceau, with scattering specimens, and a hundred of Fondante du Automne, without the desired result, though fine thrifty trees. Fifty of Swan's Orange are in the same category, to which we add seventy-five Beurre d'Amalis and twenty-five of Vergalieu, with one hundred of the La Jalva; but here comes a relief in the way of one hundred and sixty Louise Bonne de Jersey, with a superb show of melting beauties. The list closes with a hundred of the Easter Beurre, that have given evidence of more growth of tree than of fruit.

The trees are set sixteen feet each way, have not been cropped, but kept well cultivated with the one horse plow. Mr. Yates says that most of the varieties bore well last year and that the fruit was much larger and fairer than this. Last spring nearly every tree blossomed profusely, but several severe frosts following in quick succession, the larger part of the orchard was stripped of the embryo fruit, yet it will be seen that the Bartlett and the Louise Bonne held a fair crop, while some others have a small show, but the great number are perfectly barren. We have no doubt that in subsequent examinations we shall find these two varieties to hold a high position as regular bearers. Mr. Yates lays the loss of a full crop to spring frost, of which he despairs of a remedy. We have before stated that the elevation is favorable to ward off this danger, and we believe that with correct culture it will produce this effect; but something more than mere plowing and planting is wanting, if the ground is saturated with moisture and the air charged with the damp exhalations of this saturated soil, it will show no other result than that attending the low ground, as it is well known that a damp at-

mosphere is more dangerous in a cold night than a dry one. The inference then is, to have this table land or orchard slope so dry that the air cannot become saturated, and as it will be lighter in consequence it will envelop the higher and dryer ground, thereby lessening the danger from frost. Underdraining is then the key to solve the mystery, but, say our friends here, "we cannot underdrain, our soil is so constituted that it will run and fill up the drains." Well, let us examine the subject a little in detail: The top soil for some two feet is a light grey colored clay loam charged with lime in abundance; in a wet time this is a mortar bed, resting on a strata of of hard-pan which, when exposed on the surface soil washed from it, is known as the "scalds." This band is from four to six inches in depth and is nearly impervious to water, so much so that the water in the soil above must needs be evaporated, and in the process saturates the air above, which being chilled kills the young fruit. Below this band the substance is a firm clay loam which is permeable to moisture, but as most of the water is held above, it remains quite compact unless in long continued rains. Now, if the water could be let down through this band by mole or tile drains, all the soil above it would become at once dry and friable, and this band itself soon weather down into kindly soil, at the same time the substratum would become modified, and the heat that now goes to evaporate the water would warm up the soil and thus create an artificial atmosphere several degrees warmer than on the undrained soil, and the result would be almost certain crops, instead of, as now, accidental ones.—There is no question in our mind that one-fourth of this orchard, thoroughly underdrained would pay a better revenue than the whole of it under the best system of tillage without this improvement. It will be borne in mind that this orchard is set on the system of flat culture; had it been well ridged up no doubt the result would have been more satisfactory. Mr. Yates cultivates his orchard four times; first from the trees, next to the trees, again from them, and last late in the fall after the growth is completed a heavy furrow to them, leaving a clean open dead furrow in the center to drain off the water; but with this flat culture it still leaves it flat and liable to water logging about the collar of the trees.

His crop is injured with a green worm about half an inch long, which glues a leaf to the fruit under which he eats the rind of the pear, which arrests the growth under the surface eaten,

and which disfigures the fruit. There is no apparent injury to the texture of the fruit; hand picking would be a cheap and effectual remedy, but most of the mischief was done before being observed.

We would suggest instead of so many plowings the use of the roller and the harrow. In this soil all trees throw their roots deeply in the soil and you can plow close to the trunk with impunity.

PEACH AND APPLE ORCHARD.

The apple trees were set two rods, or thirty feet apart each way, and intermediate rows of peach trees set through them both ways, making the squares sixteen and a half feet. These are also cultivated with the single plow and mule, but receive less attention than the pears. The trees have been set four years. The apples have not made remarkable growth, from bad handling in the first place by the nurseryman; few of them have fruit. The peach trees are loaded down, and the orchard of a thousand trees will furnish several hundred bushels for market, and cannot fail of making good returns for the outlay. Of the varieties we shall speak in another place.

THE CHINCH BUG.

The chinch bug has become a permanent enemy and makes his annual inroads into the field crops. From the wheat stubble he attacks the corn and continues with it the remainder of the season. A constant stirring of the soil is the best remedy now known to protect the corn; he does not like to be covered in dry dirt at all.—The late Hungarian grass affords the most pleasant food for him.

THE WHEAT MULGO.

We had hoped that we would have been spared the infliction of this pest, but it appears that we are not, for he is reported here in already uncomfortable numbers. Early sowing is the best known remedy—but then comes the Hessian fly, with this early seeding. Here we have another incentive to try the early seeding and pasturing which we have before recommended. The May, or Alabama wheat, from its earliness, has in most cases escaped them.

The yield is good, and from the best evidence that we can get, will average thirty bushels to the acre.

THE PEACH GRUB.

Mr. Yates finds the peach grub somewhat troublesome. His remedy is to take them out

with a knife in October, they are then small and to work in the bark. With a garden trowel he lays the collar of the tree bare, and with a knife takes out the young grub. The process is not a very laborious one and should not be neglected.

THE FAMILY MEDICINE CHEST.

The vegetable garden is the great medicine chest of the farmer, and it should be well filled with good, thrifty, well cultivated plants. No labor on the farm will pay so good percentage as that devoted to the production of a good vegetable garden to the extent required by the family.

MANURE.

On this large fruit farm no regard is had to the saving of manure, and certainly the pear and peach trees, with thorough culture, do not need it, yet the old apple orchard now in grass would well repay the outlay for a reasonable supply.—The small fruits need it for mulching, and it would be valuable in the garden if not on the corn, but its use is, we believe, entirely overlooked.

We arrived in Centralia in the afternoon and had the pleasure to meet Mr. A. P. Crosby, waiting for us with a carriage. His farm is about one and a half miles southeast of the station, on a gentle slope overlooking the village. The apple orchard which he had entered for the premium was almost level, gently sloping to the southeast just enough for surface drainage. The trees when planted were three years old, and have been set six years. The culture has been of the best, otherwise there would have been no orchard, for the trees in the first place were badly grown in the nursery and worse handled, giving them a set back on transplanting that required some two years of generous care to bring them up to grade. They are now in the most thrifty condition and presenting a fair show of fruit for such a selection of varieties. The trees are set thirty-two feet apart, on a level surface, and the ordinary level culture is adopted. A crop of buckwheat is now some two inches high.

VARIETIES.

As we enter the orchard from the north side we are greeted with two rows of Red June, rich in the deep red of their pomonal beauties; twenty-one of these marshaled into line loaded with fruit, now ripe, would gladden the heart of all the school boys of the more tardy north. Twenty

Raules' Jennet, with a fair crop, in their round, symmetrical heads. Ten Yellow Belleflower, loaded with a heavy crop, as is its wont in this part of the State. Ten Franklin Golden Pippin, with but few specimens; the tree is too upright, with head too high—we would re-graft it. Ten trees of that spring favorite, the Little Romanite, always to be depended upon, and always will keep good; though not of high flavor it will continue one of the people's apples. Nine Newtown Pippins, with compact head and moderate growth, but here it is at home, and the crop is fair in quantity and superior in quality. Ten of the Rambo have made large growth, but even here it shows the effect of the winter. It will not do to stimulate them with high culture. They have a fair crop, notwithstanding the hard usage of the winter. Now they have commenced fruiting their growth will be less rapid, and of course more hardy. Three trees of the Early Harvest have never fully recovered from their nursery treatment. Seven of the Summer Queen are patterns of thrift and bearing; the fruit is nearly ripe. This will be found profitable for market; it is a hardy, good growing tree, productive and strong. The orchard contains in all one hundred and ten trees, and reflects no small credit on the care and skill of its owner, whose spare hours from the active duties of the counting room, are devoted to his pomological pets.

ANOTHER APPLE ORCHARD.

Mr. Crosby has another orchard of five hundred trees, taken from the nursery at three years old, and now two years set. This is the finest orchard of its age that we have seen anywhere. The trees were grown at the Dupage County Nursery of Messrs. Ellsworth & Co., and show that they know how to grow trees, how to lift them, and next, though not least, how to pack them for shipment. The heads are low, from two to three feet, with clean, straight trunks. Some few of the trees are in bearing. The selection of varieties for a commercial orchard is not the best, for this point, containing too many autumn varieties. The early summer apples are wanted for the north and the late keepers for the south. The trees are set twenty-six by forty feet, and are to be cropped with hard crops for some years until in full bearing. If we are not mistaken this orchard will prove a mine of wealth to the owner. This orchard has received far less attention than the other, from the fact that the nurseryman done his duty. The day is not distant when planters will be more careful to whom they give orders

for trees. The idea that a tree is a tree as much as a post is a post, will not be tolerated, for there are live trees, dying trees and dead trees, but generally sold at the same price.

PEACH ORCHARD.

This orchard has been set but two years, with trees but one year old from the bud; the growth of the tree is most remarkable and healthy. Of course, too young to produce much fruit in this vigorous condition. The varieties are seventy-two of Coles' Early Red, which have a moderate show of specimens; the same number of Early Crawford, with a fair show of fruit; twenty-four Early York, some of which are loaded with fruit nearly ripe; ten of Hawks' Early Cling(?); twelve Belle Shivers(?); twenty Grosse Mignonne, fruiting; twenty-four Early Royal George; fourteen Old Mixon Freestone, with a good crop; twenty-two Late Crawford; twenty Alberge; eleven Stump the World(?); forty-three Red Cheek Malacoton; twenty Hawks' Early Red; twenty Compton's Rare-ripe; twenty George the Fourth; eighteen Heath Cling; thirty-six Ward's Late Free; fifty-five Druid Hill; in all, five hundred trees, probably of their age unsurpassed anywhere in the State. The aspect of the orchard is a tolerable rapid descent to the northwest, but not enough so to wash the soil in heavy rains. A crop of beans sown broadcast is on the ground. Mr. C. uses the roller to great advantage; he finds it very economical, and would not think of doing without it. The trees are set twenty feet each way.

After leaving the fruit farm of Mr. Crosby we called to view the garden of C. A. Montross.—We are promised some account of his operations and shall pass over a further notice at this time, further than to say that if there is another garden in the State the same size of his equally valuable we would like to see it.

A DELAY.

We booked ourselves to leave for Sandoval on the one o'clock train, but the clerk failed to call us, and we had the annoyance of laying over and deranging our plans. We could well put up with paying for our breakfast, but the time lost, nearly a day, was bad enough, to which was added the insolence of an upstart clerk just promoted from the scullery. The landlord is supposed to know how to keep a hotel, but for some reason he has placed a too high an estimate upon the ability and integrity of his protegee, who, if we can believe one-fourth of what is told of him,

would do better in the stable than in his present position. We hope for the credit of this house, which has under its former proprietors held a high place in the estimation of the traveling public, that it be not ruined with this class of upstart insolence. As a general thing the public have no high opinion of these railroad eating houses, and unless they make some improvement it would be just as well not to lose any time with the trains in stopping the twenty minutes for meals. A sandwich of boiled ham, bread and butter, as a general thing, is the safest, and it is a curious fact, and one of no small significance to these men, that the better class of passengers carry their own rations with them. It is time there was a reformation in this regard; it is alike due to the railroad companies that travelers should not be swindled at the houses where trains stop for meals, as it is to the traveler.—Men and women will not travel for pleasure under any such circumstances. A hotel that fails to call its guests at the proper hour and then charges them for meals when they are thus delayed, is unworthy of patronage, and especially when puppies are allowed to fill the place of judicious servants.

At ten o'clock, a. m., July 24th, we reached Sandoval, and found our young friend Charles Kennicott in waiting for us. His nursery is about one mile east of the station and adjoining the south side of the O. & M. R. R. The ground slopes gently to the south, and the long rows of trees now full robed for summer, forms an attractive feature, and are in strong contrast to the wide sweep of uncultivated prairie to the north and east. Never have we seen fifteen acres of apple tree nursery better cultivated nor trees more uniform and so well grown—nothing of the whp-stalk order, nothing of the "tree peddle" look in them, but with well formed low heads and stocky trunks, just such as the farmer wants for his orchard, just such as the market orchardist needs to lay the foundation of his success, and just such a selection of varieties as have been found adapted to the soil and climate of this part of the northwest. Born almost in the nursery, at all events reared in one filled with the useful and the beautiful, making it a life study, a business and a pleasure, in which good taste and training have been combined, it is no wonder that our young friend, here on the prairie slopes of Egypt, has commanded a success.

The grounds devoted to ornamental and the small fruits cover some three acres. Among the small fruits we notice nearly the whole family of

currants and raspberries—Houghton's gooseberry stand solitary as the only reliable kind in this section. About half of the nursery is budded six to fifteen inches high, and the remainder root grafts. The heads commence at two or three feet from the ground.

The rose is a great favorite here, and the cultivation is extensive and select. Evergreens make a fine growth and are much in demand.—We remained here fourteen hours for the next train, which gave us an opportunity to visit the grounds of Mr. Price, which adjoin Mr. K. on the west. Mr. P. is a farmer and a botanist, and his grounds are rich in rare hardy plants. He has done considerable underdraining, and finds in it a marked advantage. In one part of his garden on which it was difficult to grow plants, they are now the most luxuriant. The drains are put in below the band of "scald" clay before attended to; in fact, there are several out-crops of it on his farm. In this part of the State the rains fall in torrents, and not as at the north, in long continued gentle showers; it is therefore of importance to get rid of the water before the plants are drowned out, and as it cannot penetrate the band of scald clay it must evaporate or be carried off in underdrains. Mr. P. thinks the mole plow cannot be forced through the subsoil at any season of the year, and that nothing short of the shovel and pick will be of use in putting in the tile. At nine o'clock a. m. of the 25th, the conductor put us down opposite the commercial gardens of Messrs Overmann & Mann, three miles west of Bloomington.

To be continued in next No.

[For the Illinois Farmer.]

Corn Culture Again.

ED. FARMER: I think some of the remarks of one of your correspondents in the June number of the ILLINOIS FARMER in preparing the ground for a corn crop are good. I approve of rolling the ground to crush the clods and close up the pores of the ground in order to retain the moisture of it in dry weather, and this should not be done until the corn is planted. The process of rolling pays the farmer well, if for nothing else but to get the clods out of the way, where gang plows are used to cultivate the corn, and this done, the farmer has only to go into his field with one of Leepers & Kidders' wheat plows, put on the small shovels next to the corn and drive ahead, without any fear of covering the small corn, and the work is done in an improved manner.

To raise corn to the best advantage the greatest ease, and in the shortest time, I would in the fall take one of Leepers & Kidders' rolling cutters, go over my stubble ground, roll down and cut the weeds and stubble about six inches in length, plow them under about ten inches deep. In the spring, before planting, go over the ground with Leeper & Kidders' old ground plow or some other good old ground plow, (can go over about eight acres a day,) and with this stir the ground, then take your marker, lay out one way, then plant with Brown's, or some other good planter, then roll to crush the clods, unless it is very wet; in that case substitute the harrow, then Leeper & Ridder's gang plow or cultivator, and use the small shovels next the corn, for the first plowing, as above stated, then my word for it, you are making corn rapidly as never done before.

I do not agree with your correspondent exactly with regard to drilling corn; I think you will never be able to get the farmer into that. The only advantage I can see in it is to accommodate gang plows to straight rows of corn. As was stated, all those cultivators at the Fair last fall were only designed to plow drilled corn; or, in other words, corn in straight rows. That is a mistake, Leeper & Kidder's plow was there on exhibition, but was not tested for want of time, and because it was not entered on the right list to go into the plowing match; that plow has an ingenious arrangement for dodging all the crooked corn with perfect care, (which is done by the feet while you have your hands to manage the team,) which may chance to stand any place within fifteen inches of the direct line of the row. So far as I know it is the only plow with an arrangement that is practical for dodging crooked corn in the row.

In Leeper & Kidder's shop, in San Jose, Mason county, Ills., may be seen a rolling cutter now in course of construction for chopping up everything that is on the ground in the way of the plow, when completed must be a valuable piece of machinery for the farmer.

As a practical farmer I would say to inventors, study simplicity and durability and avoid complication. I do think the idea not a good one to try to get up a machine to plow your ground, roll your land, plant your corn and drill your wheat, all with the same machine.

Respectfully yours,

CITIZEN.

— The communication of "Citizen" came without the name of the writer, but from its practical turn we step aside from our rule in such

cases and insert it. We shall hope to hear from him again, and that he will give us his real name, not that we want it to append to his communication, but we like to know our correspondents.

He is in error in regard to arrangements on other two horse cultivators than the Messrs. Leeper & Kidder's, to follow crooked rows. Turner's and others have equally as good, but we look upon them as of little value. Farmers can, and should plant the rows straight, when all that is required is good driving, thereby saving a needless expense and extra weight of machinery. There can be no question as to the advantage of drilling over hill planting, as will be seen by the July number. Deep plowing is almost a new feature in Egyptian farming, and we hope that others will follow the plan of our correspondent.

We prefer to plow under the standing stalks by the use of our weed hook to cutting them in pins. The implement for that purpose is expensive in itself and expensive in its operation. To use it the surface must be firm and the stalks dry. We have no expectation of its coming into general use.

Ed.

[For the Illinois Farmer.]

Hedging.

ED. FARMER: Harvest is now over, and the farming community throughout this section can once more rejoice at having secured a medium good yield of wheat. In St. Clair county the crop was exceedingly fine, the stalks being of a good height; the heads were filled with plump and fair grain. During harvest I passed through different portions of Washington and Jefferson counties, and saw a great deal of fine wheat. In different portions of the latter county the crop has been materially injured by the chinch bug and other pestiferous insects, but we have reasons to believe that their depredations have been confined within narrow limits. Central and Southern Illinois are undoubtedly well adapted to the raising of wheat as well as many other articles of consumption. In some localities broad and expansive prairies spread out as far as the eye can reach, while in others we can behold large forests of fine timber in sufficient quantities for all ordinary occupations, and the soil, which is inferior to none, covered with beautiful and luxuriant herbage. Apples, peaches and pears flourish, and with little attention will produce abundantly, while many other articles of domestic consumption are produced equally well. We are satisfied that our farmers cultivate

the soil well, but we are not so prejudiced as not to believe that there is considerable room for improvement. As a man's success in a professional line very often depends much upon the preparations he has made to accomplish his designs; likewise the acquirement of a good crop depends mainly on the manner in which the ground is tilled; it should be broken up deep and regular, and if corn be planted therein it should be cultivated as soon as it becomes large enough, for the soil being very productive, weeds will spring up in a short time, which will stunt the corn and materially injure the crop. The system of hedging not being much introduced, the farmers protect their crops by rail fences, and in many instances the corners of which are literally filled with weeds, which we think is somewhat injurious to the fence—would it not be better for the farmer to plow up that portion of land which he intends for a fence row, and sow it in some kind of grass seed previous to placing his fence upon it? This kind of a crop would certainly be less injurious than weeds, and in many instances produce hay of considerable value.

Yours, etc.,

AMERICAN.

Fayetteville, July 20, 1861.

Hedging is now so well understood that it will come rapidly in use throughout Southern and Central Illinois. Before the planting season arrives we shall give plain directions in regard to its planting and culture. On our trip thus far with the "Farm Committee" we have observed two fine lots of Osage plants; one of fifty acres which give promise of making very fine plants. Of these we shall speak more at length in the next number.

Before the fence is put up the ground should be plowed and sown to blue grass or Hurd's grass and clover. Cattle and horses would feed this close on the outside, and thus prevent loss by fire, which annually sweeps off hundreds of miles of rail fence. The inside grass could be cut for hay, and when the stock is turned into the field they will find a good supply of green feed instead of dead weeds along the fence.

A few days since we passed through St. Clair county and can bear testimony to a good yield of wheat; farmers complain of the Hessian fly and mulgo—mention of which is made in another place.

ED.

—Why are black eyes called piercing? Because they can look daggers when they like.

[From the Country Gentleman and Cultivator.]

No. 29—The Army Worm Moth.

Messrs. Tucker: I have an illustration of the "pursuit of knowledge under difficulties" to present. Dr. John Bartlett of Pesotum, Champagne county, Ills., sends us in spirits, in a tin tube, a specimen of the renowned Army worm, and of the moth which is bred from it. Now spirits is the very best vehicle in which to preserve and transmit all kinds of worms, spiders and beetles; but insects with delicate wings, such as butterflies, moths and flies are usually ruined by being wet, their wings becoming matted together in a wad, like a wet dish-cloth, and if prettily colored, their colors are liable to be altered or destroyed by spirits. An inexperienced collector, therefore, will do best to place such insects between layers of cotton in a small box, to transmit them without injury by mail or express.

On emptying the tube from Dr. Bartlett it was with deep regret that I saw this moth of the army worm lying before me, soaked to a soft, shapeless, black mass, which might on drying wholly fail of showing me the same colors and spots which naturally belong to it. On carefully disentangling and spreading its wings, and drying it, my first step was to compare it with the broken and effaced specimens received last year from Dr. Jenkins of Maryland, mentioned in my letter to Hon. B. P. Johnson, lately published in the *Co. Gent.* I hereupon saw that the army worm in Maryland last year, and that now in Illinois were undoubted one and the same insect. And now, by a searching look from one to the other of these soiled and imperfect specimens, I was able to gather from them certain marks by which I thought I could recognize this insect if I chanced to have any other specimens of it in my collection. Upon looking over the moths of the cut worms I find nothing like this among them. Turning then to another group, lo, here I have it!—two perfect specimens, received a few years since in a fine collection from Prof. D. S. Sheldon of Iowa College. *Laus Dei!* The riddle is now read! What for nearly a score of years I have been so anxious to obtain I now have! I know what the moth of this army worm now is! And in the fulness of my joy hereupon, I thank you, Prof. Sheldon, and you Dr. Bartlett, and Dr. Jenkins, each and all, that you have collectively furnished me with such clues as have enabled me to make this discovery.

A short sketch of the history of this species, as it appears in our works of science, will interest the reader. Long ago, a preserved specimen of this moth found its way into the then celebrated collection of Mr. Francillon in London.—Upon the breaking up and sale of that collection, this specimen passed into the possession of Mr. Haworth, who, not doubting but that it had been captured in England, described it very briefly, in the year 1810, in his *Lepidoptera Britannica*, page 174, naming it *noctua unipuncta*, or the White Speck, by which names it has ever since been referred to by English authors and collectors, save that a new generic name, *Leucania*, replaces that

of *Noctua*. It appears to have been through inadvertency that Mr. Stephens changed this name to *impuncta*, when he came to describe the species in 1820, in his *British Entomology*, *Haus-tellata*, vol. iii, p. 80. Later, in 1850, he refers to it under its original name, in the *List of Lepidoptera* in the British Museum, p. 280, it having now been ascertained that it was a North American and not a British insect.

Guenee appears to have overlooked this species of the *Lepidoptera* (vol. v., p. 77—Paris, 1852,) he regards it as a new species, naming it *Leucania extranea*. From him we learn that there are specimens of it in several of the Paris collections, whereby they know it to be a common insect in North America, Columbia and Brazil. He also states that a variety of it which is destitute of the white dot on the fore-wings, occurs in the East Indies, Java and Australia. I cannot but think, however, that this East India insect should be ranked as a distinct species from ours, as it differs in such a prominent character, and is so widely separated from it geographically.

From what has now been stated, it will be seen that the original and therefore legitimate scientific name of this insect is *Leucania unipuncta*. And the Army Worm Moth will undoubtedly be the common name by which it will be currently designated in this country, instead of the White Speck, the name given it in England.

About a dozen New York species of this genus, *Leucania*, are known to me. They are those white and pale yellow moths or millers which are so common in our meadows and other grass lands and which flit aside in such numbers when the scythe of the mower sweeps their coverts from them. And the "black worm," which in this section of our Union sometimes shows the same gregarious and migratory habits as the army worm of the Western and Southern States, I now infer to be the larva of some one of these moths.

I have scarcely sufficient space remaining to give in his article such a full and particular description of this moth as ought to accompany this announcement of its name, and will enable every one to distinguish it with certainty from other moths which resemble it.

It is very plain and unadorned in its appearance. The eye, on first glancing at it, only recognizes it as an ordinary looking moth of a tarnished yellowish drab color, inclining to russet, with a small white dot near the centre of its fore wings, and a dusky oblique streak at their tips. On coming to look at it more particularly we find it to be rather less than an inch long to the end of its closed wings, or if these are extended it is about an inch and three-quarters in width, different specimens varying somewhat in their size. Its fore wings are sprinkled with blackish atoms, and a short distance forward of their hind edge they are crossed by a row of black dots, one on each of the veins. Outside of the middle of the wing this row of dots suddenly curves forward, and from this curve a dusky streak runs to the tip of the wing, the ground color being more pale and clearer yellow along the outer side of this streak. Though the moths of some other genera usually have a similar streak, this is the only spe-

cies of this genus in which this mark occurs, and hence M. Guenee names this species *extranea*, i.e. extraneous, foreign, different, as though it did not belong here. And Mr. Stephens doubts whether it correctly pertains to this genus. But a character that will appear to common persons as more conspicuous and important, is that from which Mr. Haworth names this species. Nearly in the centre of the wing is a milk-white dot, placed upon the mid vein. This dot is surrounded more or less by a dusky cloud, and this dusky is frequently extended forward upon the mid-vein to its base, forming a faint darker streak along the middle of the wing. Contiguous to this dot on its outer side may be discerned a roundish spot of a slightly paler yellow color than the ground, and a very short distance forward of this is a similar spot, but smaller, both these spots often showing a more tarnished center. On the hind part of the wing the veins are marked by slender whitish lines, and between their tips on the hind edge of the wing is a row of minute black dots.

The hind wings are smoky brown, with a purplish gloss, and are nearly transparent, with the veins blackish. The fringe of both pairs of wings is pale yellowish, with a dusky band on the middle.

On the under side the wings are much more glossy and paler, opalescent whitish inwardly, and smoky gray towards their outer and hind sides, where they are also freckled with blackish atoms. The smoky color on the hind wings has, on its anterior edge, a row of short, blackish lines, one placed on each of the veins, and in line coming more distinct towards its outer end, or sometimes only represented by a dusky dot on the outer margin forward of the tip. The veins are whitish, and also the hind edge, on which is a row of black dots placed between the tips of the veins. The hind wings have also a blackish crescent-shaped spot a little forward of their centre.

The abdomen or hind body is smoky gray above, and on its under side ash gray, freckled with black scales, and usually showing a row of black dots along each side.

Though these moths are subject to some variety, whoever has one of them in his hands will find it to coincide so exactly with most of the particulars stated in the above description, that he will be fully assured it is this insect.

Salem, N. Y. July, 1861.

ASA FITCH.

P. S.—July 17. A fine specimen of this moth reaches me to-day from Mr. Emery, editor of the *Prairie Farmer*. It is a male, and indicates this sex to be smaller, measuring but little over an inch and a half across its spread wings. It is also of a darker or more smoky gray color, but does not appear from the description above given.

A. F.

—"I say, boy, is there anything to shoot about here?" inquired a sportsman of a boy he met. "Well," was the reply, "nothing just about here? but the schoolmaster is on the hill yonder—you can pop him over."

Importation and Production of Wool in Great Britain—The Long Wools vs. the Short, Fine Wools.

The following paper was read before a late meeting of the Council of the Royal Agricultural Society, by James Caird, Esq., M. P.:

There has been an immense increase in the importation of foreign and colonial wool during the last twenty years; yet the price of British wool has not only undergone no diminution, but its production continues to be one of the most profitable branches of our agricultural industry. The total importations have increased from 45,000,000 pounds, 1842, to 133,000,000 pounds, in 1859; of which our own colonies and possessions furnished 82,000,000 pounds. (I am giving you the last statistical account that we have, furnished to April, 1859.) From Germany and Spain there has been in that period a diminution of over 4,000,000 pounds; but from other European countries, chiefly from Russia, the low countries, Denmark and Portugal, there has been an increase of 20,000,000 pounds. From our own colonies and possessions the increase during that time has been as follows, in round numbers—from Australia the increase has been during twenty years from 13,000,000 pounds to 54,000,000 pounds; from South Africa the increase has been from 1,000,000 pounds to 14,000,000 pounds; from the East Indies it has risen from 4,000,000 pounds to 14,000,000 pounds in the year, that is between 1842 and 1859.

These figures show an increase so enormous that we cannot but be amazed that the price of home grown wool continues, in the face of such imports, to be remunerative. But if we attempt to estimate the total produce of the United Kingdom, the results will appear still more remarkable. The number of sheep in the three kingdoms may be taken at 30,000,000. The total produce of wool may be estimated at 120,000,000 pounds. In 1842 the home-grown wool could not have exceeded 100,000,000 pounds. A comparative statement of the supply will stand thus: In 1842, both the home and foreign supply amounted to 145,000,000 pounds, in 1859, the home and foreign supply amounted to 253,000,000 pounds; making a total increase of 108,000,000 pounds, which shows an increased supply in the growth of one of our great staples of manufacture to the extent of nearly seventy-five per cent., and this not followed by any diminution of price to the home producer. This has been caused partly by the increasing prosperity of the woollen manufacturers at home, but partly also by their increase abroad. France alone took from us, in 1859, 6,000,000 pounds of British wool, and upwards of 12,000,000 pounds of colonial wool.—She took the larger portion of Irish wool, and France and other foreign countries relieved our market on the whole, in 1859, of 28,000,000 pounds of wool, which was equal to three-fourths of the whole produce of Scotland and Ireland.

The practical point to which I am anxious to direct your attention is the change that has taken place in the relative prices of different kinds of wool, and the importance of a knowledge

of this to the British farmer. The competition to which we are chiefly exposed lies in the shorter and finer qualities of wool. From Australia, the East Indies, South Africa, and South America, we received, in 1859, upwards of two-thirds of our imported wool. And the whole of that region, which will most probably continue to increase most rapidly in its produce of wool, is suitable to the production of the lustrous long wools which are now in great demand. The British islands produce this kind of wool in the greatest quantity. A small portion comes from the north of Europe and Ireland; but hitherto we have held in our hands almost a monopoly of this supply, and as Nature has given us this advantage, we ought to make the most of it. The short fine wools of this country, such as the Down and Cheviot, formerly sold at double the price of Lincoln or long combing wool. When the Colonial wool trade had no existence, in 1811, Cheviot wools were worth 2s. 6d. per pound, when the Lincoln brought no more than 1s. per pound.—But in proportion as the market has begun to be supplied with fine Australian wool, the relative values of the two have greatly altered. In July, 1851, the Lincolns had reached within 2d. per pound of half-bred Cheviots, and in 1856, within 1d. per lb., and in May, 1861, the Lincoln long wool was the dearer of the two. The change in price as between the Down and Lincoln wools has been equally great. The two kinds of wool are used in the manufacture of different classes of goods. Coburgs are made from Australian, merino, Down, and other fine short wools, of which there is a constantly increasing supply. Orleans and alpacas are made from the lustrous long wools, for which there is a constantly increasing demand, and a limited area of supply. In short, in fine wools there is no lustre whatever; in the long wool lustre is a most important quality. Alpaca and mohair are introduced to a slight extent to produce lustre in the cloth; but as the supply of that description of wool is only two per cent. of the whole import, it will be obvious how little that will affect the price of home-made lustrous wools. There is a great and increasing demand for Orleans and mixed alpacas, and of lustrous goods in which the object is not merely fineness to the touch, but a lustrous appearance. Besides the British demand, there is an increasing French demand both for that kind of wool and for the goods manufactured from it. The French manufacturers already take the most of the long lustrous wool of Ireland.

The practical conclusion to which I arrive is, that the British wool-grower should develop as much as possible that kind of wool which is least subject to foreign and colonial competition, and for the production of which he fortunately possesses both the most suitable soil and climate, and the supply of which can be best increased by good farming, liberal feeding, and with a large frame of mutton, as well as heavy fleece of wool. For this purpose the best cross probably that can at present be adopted on suitable soils would be by using the improved Lincoln or Leicester ram, in which the desirable qualities of length, lustre, strength, and fineness of wool seem to be best combined.

The reading of the above paper was followed by a discussion in which there seemed to be no dissent from the opinions expressed by Mr. C. with regard to the superior importance of the long-wooled sheep, for the British farmer, as far as the fleece is concerned, over the fine and middle-wooled breeds. This arises from the fact that so much wool of the Merino and Merino grades is now produced in Australia, South America and elsewhere; and the great principle laid down by Mr. C. in conclusion, is one that should not be lost sight of by sheep men here, any more than there—viz.: that “the wool grower should develop as much as possible that kind of wool least subject to foreign competition, and the supply of which can be best increased by good farming, liberal feeding, and with a large frame of mutton, as well as a heavy fleece of wool.” The statistics given show that the styles of goods now in constantly increasing demand are those made of the “long, lustrous” kinds of wool, and that the price of this description of fleece has been gaining regularly for many years upon that of fine wool. Just now, indeed, in this country, we believe the coarse wools that can be made into army cloths are the only kinds that sell at all, but of course this is an exceptional case.

One object we had in referring to the subject here, was to record as among the results of the discussion, the admitted fact that the character of the wool depends considerably upon the feeding of the sheep. The lustre which was referred to as especially important, is thought to be “very greatly dependent upon a system of turnip-feeding and good feeding generally;” and one speaker remarked—we do not know whether he limited his remark to long-wooled sheep alone, or intended it to apply to other breeds—“that if you feed the animal pretty well as a lamb, and then at any period of its life by any accident it is stopped from feeding, the wool immediately shows it, and becomes deteriorated; and they also say it breaks in the manufacture.” And Mr. Fisher Hobbs also urged the importance of liberal feeding: “I am sure,” he said, “that nothing would pay the flock master better than feeding the sheep in the spring of the year with generous food, especially with oilcake. If, however, you begin feeding your sheep with oilcake in the spring, and then take it off merely for a week, the wool stapler will tell you of it. The oil flows into the wool, and if it is checked even by a week’s poverty, or almost by one night’s exposure to bad weather, it will greatly deteriorate the quality of the fleece.” He thought the oilcake should unquestionably be continued until the fleece is sheared.

With reference to South Down Sheep—a breed in which many here have the impression that the wool has been sacrificed to the mutton—Mr. Hobbs afterwards said “that a Down flock would not now be considered as yielding a fair amount of wool if it did not average a pound, or a pound and a half, more than a Down flock would yield twenty years ago, when the animal was smaller than at the present time.”

Prof. Wilson confirmed Mr. Caird’s statement that “the day for fine qualities of wool was rapidly passing away. We know now that none of us wear the fine Saxony cloths that we used to wear when wool was sold at a high price to manufacture an expensive material to be worn by a few. The great object of the day now is to get a cheaper article that can be worn by the many, and Bradford, Leeds, and all those parts of Yorkshire, testify to the fact that the manufacture of looser goods, which are made from long wools is rapidly increasing; while the manufacture of finer goods from the short wools is as rapidly decreasing. He afterwards asserted that Australia and New Zealand “can supply all the fine wool that the world wants.”

It must be remembered in reading such a discussion, that England undoubtedly possesses some advantages for the management of her improved breeds of sheep, which we have not, and that very much depends upon the *locality* of any particular point, in selecting the kind of sheep which can be kept there most profitably; what Mr. Caird said in regard to crossing different breeds is equally true in choosing the flock at the beginning, “it is necessary to bear this always in mind—that both climate and soil must be very much considered; and any general recommendation to cross with a particular breed should be received with very great caution.”

What we have written therefore, has not been intended to discourage those who have flocks of fine wool sheep, which doubtless in many parts of the country will better repay their cost, food and care, than any others; but to encourage those who have undertaken the keeping of the mutton or longer wool breeds, and who under the less favorable prices of meat the past season may have thought themselves ill rewarded for their efforts. We cannot but think that our farmers should all pay a greater and more regular degree of attention to sheep, than they have heretofore done; and near the cities, where mutton and lamb, of really the best quality, are always in greater or less demand, but where the value of the fleece is also an important element, it is a question to be decided whether a touch of Cotswold, Leicester or South-Down blood, will succeed the best and pay the most. Away up in Canada West, where the winters are still longer than ours, we find the farmers raising turnips and keeping long or middle-wooled sheep: what is there in the Yankee character that renders it so inflexibly and diametrically opposed to anything that savors

———“o’ carrots and mang’ls and sich—
As if carrots and mang’ls would mak’ a mon rich!”

and makes it cling so closely to the two-pound fleece and thirty pound style of carcase that has been stunted and starved, and complimented with the title of *sheep*, for so many generations among us?

— Good men have the fewest fears. He has but one who fears to wrong. He has a thousand who overcomes that one.

[Written for the Valley Farmer.]

Calendar of Operations in the Vineyard.

AUGUST.

As this is the month for the coloring and ripening of the earlier varieties of grapes, the vineyard will need close attention.

If your vines have been thoroughly summer pruned, the grapes will be well covered with young leaves, and but little tying will be well covered with young leaves, and but little tying will be needed. Should some bunches, however, be too much exposed, tie young shoots over them, as this is the month for sun scald. As this month is generally very dry, keep the ground mellow, and hill up to the vines slightly, either with the hoe or hoe.

Birds will be very troublesome, especially on our early grapes. If you have but a few vines of an early variety, protect them by mosquito netting; it will be the easiest plan. For the general crop, there will be no other plan than to send a man or boy into the vineyard, to make all the noise he can and scare them off; for I will not suppose that you, gentle reader, are one of those bird slaughtering, blood thirsty men, who wage war constantly on these the best friends of the vine grower. Cherish and protect them on our place, and especially in the vineyard—they will destroy millions of insects; even if they do eat grapes it is only their due for benefits conferred, which they take.

This will be the time for summer layering.—Lay the young shoots you wish to layer flat on the ground, or bend them down, and cover about an inch deep with mellow soil, leaving the tops out.

Get suitable casks in readiness to receive your must, if you intend to make wine. If you get few casks, such as will hold from 150 to 200 gallons are the most convenient size. Have them made of good, well seasoned white oak wood and bound with strong iron hoops. Prepare everything for wine-making next month. You need a good cellar—arched, if possible—a large tub or vat to receive your mashed grapes; this ought to be wide and low, to make it more convenient, with a faucet on one side to draw off the must; a press, of which there are many different kinds in use. One of the cheapest and most convenient kind is the following: An iron screw, three or four inches in diameter, is used, either in a strong upright frame, or coming up through the center of the platform. A strong, tight, box platform, six or seven feet square, is made of strong plank which are grooved. It ought to slope two or three inches towards one side, which is left open, the sides being about six inches high. This is wedged in between heavy timber, and a gutter placed underneath, to lead the must into a tub on one side. Boards to lay across the mashed grapes, and oak scantlings to receive the pressure, complete the arrangement. The power applied by a strong lever through the nut of screw. You also want plenty of pails to cut your grapes into—tin pails are best for that purpose. You have all these things prepared you can rest easy until next month.

G. HUSMANN.

THE CROPS.—Our farmers are now in the midst of their wheat harvest, and from all directions we have the most cheering accounts of the abundant yield. It is undoubtedly the best crop that has been harvested in this neighborhood for several years.

The corn, and other growing crops, never promised better at this season of the year than they do now.

There will, also, in this immediate vicinity be a fine yield of all kinds of fruit.—*Pike Co Dem.*

Pike county, from its geographical position at the confluence of the Illinois with the Mississippi rivers, should be one of the most valuable counties of the State for grain pasturage and fruit. It is well located to secure more than an ordinary share of summer showers, yet the past year was one of unexampled drouth and farmers lost largely. It is therefore with pleasure that we chronicle a returned prosperity.

Crops in Schuyler County.

Our wheat crop is all harvested, and farmers are generally well satisfied. Oats have also done well, the straw is short, but the yield of grain will be very good. Just now the appearance of corn is splendid, but we are having rather too much dry weather for it. Hay it was supposed for some time would be a failure on account of the army worm, but after all, there will be a large supply of it. Potatoes are suffering for want of rain, for the same reason the early potatoes have yielded but scantily. We will have an abundance of apples and peaches—plums, grapes, blackberries and other wild fruits also abound. Nature has been lavish of her gifts to us this year, but we are sorry to say there is but little or no market for them.

The price of wheat ranges from 40 to 50 cts. but no one is offering cash, there being no market abroad. Oats sell for 12½ cts. per bushel, and corn 12½ cts. A farmer the other day brought 10 bushels of corn into town and sold it for \$1 00. Hay about \$5 00 per ton—it has been offered at \$4 00. White beans 50 cts. per bushel. Green apples are 50 cts. per bushels, and dried apples \$1 00! Early potatoes have been selling at 50 cts., hams 7 cts. per lb., side-meat 7 cts., shoulders 6½ cts.—Flour is \$2 50 per hundred pounds; meal 25 cts. per bushel; butter 8 to 10 cts.—it has sold here recently at 5 and 6 cents. Lard 8 cts.; coffee about 20 cts.

To sum up, we have an abundance of nearly every commodity of the grain, fruit and vegetable productions, but no market for them, nor no expectations of a market unless the rebellion is speedily crushed.—*Citizen.*

—A wit once asked a peasant what part he performed in the great drama of life. "I mind my own business," was the reply.

Pickling in Vinegar.

Pickles are prepared from vegetables, fresh, salted, or dried, and mixed with vinegar, which should be of the best common kind or distilled. The safest vessels to use for boiling vinegar are those of enamelled iron; a slight oxidation may arise from the action of the vinegar upon an iron vessel, but not sufficient to be dangerous. Acetic acid dissolves the lead that is used in the tinning of saucepans. Pickles should never be put into glazed jars, as salt and vinegar dissolve the glaze, which is poisonous. The jars in which they are kept should either be of stone or glass. They should be closely covered; and have a wooden spoon, with holes to take them out of the jar, all metals being improper. They should be well kept from the air, and the large jars should be seldom opened, and the top closely covered. Those pickles in common use for the table are best kept in the ground glass stoppered pickle-jars, which retain the vinegar without difficulty. It is necessary that the pickles should always be entirely covered with the vinegar; examine them frequently, and if any symptoms of mold appear, remove the part affected, and boil the vinegar again, with additional spices. When vinegar is added to old pickles, boil it, but let it stand to be cooled before it is poured over. When first pickles are made, the vinegar should be put over them boiling. Of all pickles, perhaps, red cabbage is the most wholesome; it is frequently made of unboiled vinegar, merely poured over the cabbage, which has previously been salted.

PICKLED BEETROOT.

Boil some beetroots tender, and pare and slice them; then boil as much vinegar as will cover them, with some mace, cloves, and peppercorns. Pour this over when boiling, and cover it close.

TO PICKLE BEANS.

Put the beans in salt and water two days; drain and dry them; then pour boiling vinegar over, letting it stand three days. Pour the vinegar off and repeat the boiling, letting it stand on the beans for three days more; then boil all together.

TO PICKLE GHERKIN CUCUMBERS.

Pick the roughest, and make a strong brine of salt and water scalding hot; put them in and cover them close. Let them stand twelve hours; then take boiling distilled vinegar, and put them in it; let them simmer, not boil, for half an hour, then put them in a pan, and keep them close covered with vine leaves, and a cloth at the top.—Should they not become sufficiently green, change the vine leaves and heat the vinegar again; repeat this till they are so.

TO PICKLE LEMONS.

Scrape twelve lemons with a piece of broken glass, cut them across in quarters, not quite through. Give them as much salt as they will hold, also rub and strew it over them, and let

them lie in an earthen dish three or four days, turning them every day; then take twelve cloves of garlic, parboiled and salted three days, a large spoonful of flour of mustard, and some Cayenne pepper to every lemon. Take the lemons out of the salt, and put them in a jar with the spice, covering them with the best vinegar. Keep them very close, and they will be fit for use in a month.

PICKLED ONIONS.

In the month of September, choose the small, white, round onions, take off the brown skin, have a stewpan of boiling water ready, and then throw in as many onions as will cover the top; as soon as they look clear on the outside, take them up as quick as possible with a slice, and lay them on a clean cloth, cover them close with another, and scald some more, and so on. Let them lie to be cold, then put them in a jar, or glass, or wide-mouthed bottle, and pour over them the best white pickling vinegar, just hot, but not boiling. When cold cover them; should the outer skin shrivel, peel it off. They must look quite clear.

TO PICKLE RED CABBAGE.

Slice it into a colander, and sprinkle each layer with salt; let it drain two days, then put it into a jar, with boiling vinegar enough to cover it, and put in a few slices of beetroot. Observe to choose the purple-red cabbage. Those who like the flavor of spice will boil some peppercorns, mustard seed, or other spice, whole, with the vinegar. Cauliflowers, cut in branches, and thrown in after being salted, will look of a beautiful red.

MIXED PICKLES.

Prepare any vegetables you like by cutting them in pieces, and let them lie in salt and water for two or three days; then make the pickle in the following manner: Boil the quantity of vinegar required with peppercorns, mustard seed, a small quantity of mace, a few Cayenne pods and ginger, and half a pound of flour of mustard mixed smoothly in a basin, to be put in while boiling; put all together in a large stone jar.

PICKLED EGGS.

Boil eggs very hard, peel them, and put them in cold water till very cold; have ready a strong pickle of white wine vinegar, with a little mace and whole pepper in it: put them in while it is quite hot, and stir that they may all look alike; do not cover the pot till they are brown. Put them into a jar, and they will be ready in nine or ten days.—*Godey's Lady's Book*.

—"Why did Adam bite the apple?" said the schoolmaster to one of his pupils.—"Because he hadn't any knife," replied the urchin."

THE ILLINOIS FARMER.

BAILHACHE & BAKER.....PUBLISHERS.

M. L. DUNLAP EDITOR.

SPRINGFIELD, AUGUST 1861.

Editor's Table.

I have no time to read, is the oft repeated answer of the farmer, when asked to subscribe for an agricultural paper. The business man who would make such an answer would be at once set down as a dolt, and we can see no reason why the same application would not be true of the farmer. In this world of progress he who does not keep posted falls in the rear and is soon out of sight. There is as much need of intelligence among farmers as among any other class, yet in the world's history we find ignorance clustering thickest around the rural districts; this should not be so, for where we find robust health we should find cultivated intelligence. The morals of the people in the country is generally much better than in the towns, and with abundance of time for reading they should enjoy more of it, not only agricultural reading, but on all useful subjects. We never knew an industrious family of farmer boys but that loved to read; but we have known the fathers of such boys neglect to provide suitable reading, and when too late awoke to the fact that their sons had imbibed erroneous notions of propriety. We have one in our mind's eye, a devoted Christian and strict in all that pertains to the outward forms of religion, but who takes especial delight in making sharp horse trades, yet is oblivious to the use of newspapers except his denominational one. The result is tobacco chewing, swearing, rowdy boys—they have been to school, but lack parental training and the influence of good books, and the news of the day; beyond the routine of their own farm they know nothing and care less. Who

would wish to give their daughters for the wives of such men—men who would, with proper training, have made good members of society. Burns was not far from right when he said:

“The rigid righteous is a fool—
The rigid wise another.”

Fathers and mothers should look well to the amusements of their children.

NATURAL HISTORY SOCIETY—This has become a live permanent institution, and its department in the next State Fair will be one of the most prominent and interesting. It is under the charge of R. H. Holder, one of the Vice-Presidents of the State Society. Mr. H. is one of the most enthusiastic ornithologists in the Northwest, and his collection of birds now in the museum of the society at Bloomington, is worth a thousand miles of travel to see. C. D. Wilbur, in the department of Geology and Mineralogy, by his untiring industry has amassed an immense collection in his departments. Mr. W. is building up a world-wide fame for the natural resources of the Prairie State. We shall see in this department a rare collection of Botanical specimens from the prairie, the woodland, and the hills of Egypt, collections of the native woods that form our groves like outlying islands in the great sea of prairie verdure, and specimens of the massy belts of primeval forests that fringe our streams and specimens of the giant denizens of the river bottoms where meet and mingle the Ohio and the Mississippi; shells from the streams of to-day, and shells from the Silurian seas of the long ago. Plants of to-day and plants from the ruins that grew long before our planet got askew of the *Ecliptic*. Insects caught and pinned to pasteboard by our friend Walsh, and insects that form the solid limestone used by our builders. Mammalogy of our age stuffed with cotton and mammalogy from away back in the rusty past turned to stone. Farmers, farmer's wives, sons and daughters, would you look into the past—would you see the wide field of natural products of our noble State, do not fail to attend the next State Fair.

TRANSMUTATION.—Some time in June last we called on an old friend in Perry county. He had a fine residence just completed, but alack a day! the army worm had ravaged his garden and nearly destroyed it; his cabbage, though eaten down, had again sprouted, but instead of heading out as well behaved cabbage had ought to do;

was intent on throwing up vigorous seed stalks, some of which were nearly in bloom; this, to him, was a strange freak, and of course he gave the credit to the army worm, which by eating off the leaves had put it into a state of rest in lieu of the usual heading, and of course the next operation was to produce seed.

Of course, we must see the new wonder of nature, or the effects of the new style of leaf pruning by the army worm, when after that we could see more clearly into the transmutation of wheat to chess, grasshoppers to army worms, and other not hitherto well understood phenomena of nature. On looking at the cabbage we were forcibly impressed with its identity with rape (*brassica rapa*), which some seedsman had set out for cabbage. The mystery was at an end, and of course the subject of transmutation as much in the dark as before.

Our friend is an excellent civil engineer, but we assured him that he would need to read the ILLINOIS FARMER more attentively hereafter or give up gardening and depend upon the market for his vegetables. The difference between rape and cabbage is too important not to be understood by the person setting out the plants.

HILL'S DOUBLE SHOVEL PLOW.—"Our farmer" says this is the best plow of the kind that has come under his notice. It was gotten up by a neighbor who has a farm adjoining ours, and is an employee in the engine shop of the I. C' R.R. at this place. He is but a new farmer himself, having a person to carry on his farm; but being thrown out of employment for a short time on account of the dull times, he concluded to get up a couple of double shovel plows. He overhauled our museum in this line, and taking some old broken car springs, from which he cut the shovels, succeeded on the first trial to perfection. We have never seen so good work done with any plow of the kind before, and we look upon it as the *ultima thule* in this direction. They are simple, strong, and cheaply made—three very important items in this or any other farm implement. We have no idea that Mr. H. thinks of manufacturing these plows or taking out a patent, and will be as much surprised to see this notice as he was to find that he had a better double shovel than any in our collection. This is the class of men who get up good implements, with ingenuity and a natural taste for farming, they can see at a glance what is wanting. We are tired of these gingerbread agricultural implements, and are

glad to know that this class of inventors and makers are getting shy of us, and well they may, for we bode them no good.

WISCONSIN FARMER.—This sterling paper comes to us for July in a new dress and enlarged to forty-eight pages. J. W. Hoyt, Secretary of the Wisconsin Agricultural Society, is editor. We are glad to see such signs of agricultural prosperity among our badger neighbors. The whole trade of Wisconsin has been East and to the pineries; hence the war has little effect upon her prosperity. Another important item, the Wisconsin bankers took a lesson of Illinois "stumptail," and instead of letting it go down for the purpose of shaving it, keep it afloat and making it better daily. The mob at Milwaukee also taught them a fearful lesson; had our bankers pursued the same course all would have been well with the farmers of our own State. We are glad to see at least one agricultural paper show signs of increasing prosperity.

TURNER'S CULTIVATOR.—We learn that this implement is to be greatly simplified and strengthened. In its simple condition, with rollers, shovel, teeth, and plant protector, it is the KING OF CULTIVATORS, but, like any other king, it can be spoiled with gew-gaws. With good cast rollers to pulverize the lumps, a strong frame for the cultivator teeth, with a simple apparatus to regulate the depth, a nice fitting plant protector, skavering knives might be added for garden culture, but in the corn field they are out of place. The draft must be low at the centre of the axles, and not at the top as at present arranged. It is time that drums made of pine boards for any implement of the kind should be thrown out of use. In these times of economy and reform the farmers will no longer submit to the use of pine and brittle ash in implements requiring strength and durability.

PEACH TREES.—We would call the attention of peach orchardists and others to the advertisement of Mr. Pullen, in this number of the FARMER. No man in New Jersey, the country of peach orchards, is a better judge of what is needed to make a good selection for profitable orcharding than Mr. P. In his list he has long since discarded all unprofitable varieties and gives his attention only to such as have proved valuable. Send for his catalogue at once, get your trees in the fall and "heel in," or set at once.

Small Horses.

New England has become quite celebrated, the world over, for fine horses, no small portion of which distinction has been contributed by the different branches of the Morgan horse family and almost the only objection made to them by purchasers is, that they are all too small for common purposes. This objection may not hold good in all cases, with those who own and use them, but it is a most serious one when they are put into market, and especially when brought to our large cities for purchasers.

With more care in breeding we could have horses of the same blood, and the same comparative goodness, of equal proportion of bone, muscle, activity, endurance and courage, and from one to two sizes larger, which would obviate the only serious objection to our Morgan horses, if the breeders of them would but give them the care and feed necessary to keep them constantly growing, from the time they are taken from the dam until fully matured. By this we do not wish it understood that we would in any way advocate pampering and over feeding, for this we believe is but little better for the animal than the neglect with which too many of the New England farmers treat their colts from the time they are taken from the mare, until they are of sufficient age to be of some use upon the farm. Colts at all ages should have good care, and such quantity and quality of food as will keep them in a healthy and growing condition, rather than in a high state of flesh. In addition to this, they should have such light work put upon them as to develop their bone and muscle, but not enough, or of such kind as to overtask them.

We should think that the average weight of Morgan horses would fall nearly or quite as low as 850 pounds. This, every intelligent breeder knows is more than a hundred pounds less than it need or should be, under proper and suitable breeding. Indeed, we believe the average could be made a thousand pounds, which, according to our notion, is the best size, when in competent form, for a horse for all purposes of the farm and road.

Mr. Rarey, in his exhibitions, brings out some very diminutive ponies scarcely more than two feet high, which he brought home with him from Europe. He thinks they are of the same race of our common horses, but which have run down to their present size from entire want of care. On the same principle we can see no reason why our Morgan horses would not become larger or smaller, according as they are bred, and still retain all their good qualities.—*American Stock Jour.*

PIKE COUNTY FAIR.—Through the politeness of J. M. Bush, the Recording Secretary, we have the premium list of this society. The rules and regulations are all excellent, and on the whole the best that we have seen. The list is well gotten up and much enlarged over last year. With the abundant crops this year in this country we shall expect to hear good results at this Fair.

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Chicago, Oct. 1, 1860-1y* JOB M. LABHART.

Publishers' Special Notices.

AGENTS.—We do not want any agents; all are voluntary. Any person so disposed, can act as agent in any place.

ENLARGE YOUR CLUB.—We want the friends of the ILLINOIS FARMER in every part of the State, and at every office, to send us how many copies of the FARMER are taken at their respective offices, and pass around among their friends, who ought to have their names added to the list. Our terms are so low to clubs of ten and twenty, that we ought to have one or the other made up at every office in Central Illinois, and at every office in the State, and at every office, one of twenty or more copies of our friends, and the friends of practical agriculture see to it, and thus lay us under renewed obligations?

TO SINGLE SUBSCRIBERS.—You receive the only copy of the FARMER that is sent to your post office. Can you not send one, or three or more new subscribers, without any trouble? Try. Sample numbers, &c., sent free.

DRAFTS.—Those remitting large amounts of money, will please send drafts on Springfield or Chicago, less the exchange. If you send cash in a letter, be sure that it is all sealed and well directed, to Bailhache & Baker, Springfield, Illinois.

THE FARMER AS A PRESIDENT.—Any of our subscribers who wish to represent the ILLINOIS FARMER for 1861, can do so at the lowest club rates, when sent to the State. For fifty cents you can travel to the eastern friends to a western agricultural fair. In no way can you invest that amount to good advantage to emigration.

SEND NOW.—Any person who remits pay for a club of ten or fifteen, or other number at the specified rates for so long, can afterwards send us five subscribers, and afterwards send us three dollars more and six copies.

TO THE CASUAL READER.—This and other numbers of the ILLINOIS FARMER will be sent to many persons who now see the first time. Will they not examine it, and if they like it, subscribe for it, and ask their neighbors to subscribe? Sample numbers, printed, &c., sent free to all applicants. See elsewhere.

HOW TO OBTAIN SUBSCRIBERS.—The best way is to send for sample numbers. Any young man by canvassing his neighbors, can easily make up a club of five, ten, twenty, but no time should be lost in doing for your neighbors

may send east for their paper which, though valuable there, is much less so here, the difference of soil and climate putting them out of their reckoning when attempting to teach us western farming.

HOW TO HELP.—The friends of the ILLINOIS FARMER will find a prospectus in another column. We desire to suggest a few ways in which they can use it to advantage. 1. Show the FARMER to those who are unacquainted with it, and tell them what you think of it. 2. Send for prospectuses, and put them into the hands of those who will use them, and place posters where farmers will see them. 3. Get postmasters interested. They see everybody, and are efficient workers. 4. Send us the names of persons in your town to whom we can send prospectuses and sample numbers. 5. Begin now, before the agents of eastern papers get up their clubs. This last hint is especially important. Let us hear from you soon. See terms elsewhere.

CLUBS. Clubs may be composed of persons in all parts of the United States. It will be the same to the publishers if they send papers to one or a hundred post offices. Additions made at any time at club rates. We mail by printed slips, which are so cheaply placed on the papers, that it matters little whether they go to one or a dozen offices.

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SPECIAL NOTICE.—For terms see prospectus on last page. All exchanges and communications for the eye of the editor should be directed to ILLINOIS FARMER, Champaign, Ill. Electrotypes and business matters, and subscriptions, to the publishers, Springfield, Ill. Implements and models for examination should be sent to the editor. The editor will, so far as it can be done personally test and examine all new machines and improvements submitted to his inspection. He will be found at home, on his farm, nearly all of the time. So far as it is possible the conductors on the I. C. R. R. will let off passengers at his place which is directly on the road, three and a half miles south of the Urbana station, now the city of Champaign.

tf

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LIST OF

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- No. 1—Cut 8 inches, wrought iron standard, for one horse power.
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- Clay soil plows—Cut 10, 11 and 12 inches, right and left hand, double and single shin, wrought standard.
- No. 3—Cut 12 inches, wrought and cast standard, right and left hand, single and double shin.
- No. 4—Cut 14 inches, wrought and cast standard, right and left hand, single and double shin.
- No. 5—Cut 16 inches, wrought and cast standard, right and left hand, single and double shin.
- No. 3—Clipper plow; cut 12 inches, wrought and cast standard, right and left hand, single and double shin.
- No. 4—Clipper plow; cut 14 inches, wrought and cast standard, right and left hand, single and double shin.
- No. 3—Cast steel, cast standard, right and left hand, double and single shin: **BOTTOM LAND PLOW**, cut 12 inches.
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- Cast steel, **NURSERY DEEP TILLER**—Cut 10 inch s, cast standard, right and left hand, single and double shin.

LIST OF

German Steel Plows.

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- No. 2—Cut 10 inches, wrought and cast standard, right and left hand.
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- No. 3—Cut 12 inches, right and left hand, single and double shin, wrought and cast standard.
- No. 4—Cut 14 inches, right and left hand, single and double shin, wrought and cast standard.
- No. 5—Cut 16 inches, right and left hand, single and double shin, wrought and cast standard.
- No. 3—Clipper plow, right and left hand, single and double shin, wrought and cast standard.
- No. 4—Clipper plow, right and left hand, single and double shin, wrought and cast standard.
- No. 1—Single and double shovel plow, with or without shield attachment.
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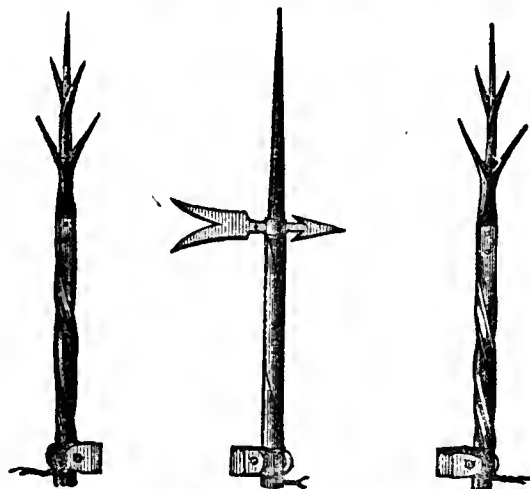
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Feb 1

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feb1-tf

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A MONTHLY JOURNAL OF

AGRICULTURE & HORTICULTURE.

IS PUBLISHED AT SPRINGFIELD, ILLS.,

BY BAILHACHE & BAKER,

AND IS

EDITED BY M. L. DUNLAP,

(THE "RURAL" OF THE CHICAGO TRIBUNE.)

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It is not necessary that the club should all be at one office—we send wherever the members of the club may reside.

The postage on the FARMER is only three cents a year in the State of Illinois, and six cents out of it.

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All business letters are to be directed to the publishers, Springfield.

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Ten cents a line for less than a square each insertion.

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Our list of Apples contains the BEST SUMMER, FALL AND WINTER VARIETIES, both for market and family use. Also, Pears, Plums, Cherry, Apricot, Quince, Currant, Gooseberry, Blackberry, Raspberry, Strawberries, Grapes, may here be found of the best varieties; besides Evergreens, Shade and Ornamental Trees and Shrubs, Roses, Dahlias, Phloxes, Chrysanthemums, etc., etc.

We have a large stock of the SILVER-LEAVED MAPLE, which is very valuable, either for its fast growth or beautiful foliage. This nursery is gaining a high reputation for the accuracy and thorough manner in which everything is done, and the proprietor is determined to make it worthy the confidence and patronage of all persons. Our Trees, Plants and prices, we are sure, will compare favorably with those of any grower in the State, and all interested are cordially invited to visit our grounds and see for themselves.

Apple trees, two years old, \$12½ per 100; three years old, \$15 per 100; Peaches, \$18 per 100. Description and priced catalogue sent on application. Letters of inquiry receive prompt attention. Packages delivered at the railroad free of drayage

JONATHAN HUGGINS.
Woodburn, Macoupin county, Illinois. feb1-tf

THE ILLINOIS FARMER.

VOL. VI.

SPRINGFIELD, SEPTEMBER 1861.

NO. 9.

September.

To write for September when the air is all aglow with solar fire, from the August sun, when the thermometer stands at a round hundred in the shade, when ice is at a premium and woollens at a discount, is no easy task. Just returned from a three weeks tour with the "Farm Committee," travel-worn and dusty, we resume the pen rather reluctantly, but amply stored with fact and fancy, gleaned in our route through all parts of the State, we shall wipe off the sweat and dish them up to our readers.

The grain crop of the State will be abundant: all that we could reasonably ask, while in fruits we have never had its like; not that the season is more than usually favorable, but from the fact that thousands of young orchards have just come into bearing and older ones have had another year's growth added to them. Apples and pears can be grown in all parts of the State, not so of peaches, nor can all of the small fruits be grown everywhere with the same results. These facts are all of value, and when properly presented will be of vast use to the intelligent planter.

The last faint notes of the busy reaper is lingering on the heated air of the northern counties, and the steady hum of the thresher has become the music of the day. The quality of the wheat from Cairo to the northern line of the State never has been better, nor a better average yield. The corn crop will be hardly up to a fair average yield, though a favorable fall may make some amends for the lateness of the season.

The army worm has played sad havoc

with the hay crop; in some instances Hungarian grass has been sown as a substitute, but in most cases the corn will be cut early for this purpose.

Potatoes will be a fair average, though not abundantly planted. Sweet potatoes and garden vegetables are more than usually abundant; what with the increased quantity of fruits and garden products the farmers are living in a more healthful and rational manner, and at the same time making a large saving over the old order of hog and corn bread, with calomel and quinine for dessert. The truth is, our country has become distressingly healthy for the good enjoyment of the doctors, and they have been the first to enlist for the war, as the great army of them that had come West were out of employment and were ready to engage in any enterprise that affords good pay with a reasonable amount of glory. We have never seen farms and gardens better, if as well worked as at present, and the substantial progress making everywhere is but another evidence of the good genius of school houses and the influence of our agricultural journals on the young farmers. With the prospect of good prices and certain markets, the farmers are looking forward with renewed hopes, which we cannot think possible will meet with disappointment.

Winter and spring wheat have become the great staples for exportation, and as their culture is being better and better understood, the certainty of the crop is enhancing the value of prairie lands.

Sheep husbandry is taking a high stand, fine wool and poor mutton have given place

to the long wool, heavy mutton sheep, and our farmers find in the mutton a pleasant change from fat pork.

One great truth is apparent to the most careless observer, that the comforts and conveniences of home have multiplied in a wonderful ratio within the past four years—tinsel has been exchanged for use—show has gone out of date, and the real comforts of life are held at a premium.

An Unofficial Look among the Farms and Nurseries.

(Continued from page 241.)

The nurseries of the Messrs. Overman & Mann are located on a high swell of the prairie, overlooking a large extent of country, yet the surface of the farm is undulating, and most of the fruit trees have their long rows running down a southern slope, and as yet unprotected from the sharp prairie winds. The stock of

NATIVE EVERGREENS

Is large, and as they have been successful in acclimating them, we shall do our readers a service by giving the process. In the first place, posts are driven in the ground at the distance of eight feet apart, say two or more rows as required, and stand out about five feet high; on these are placed poles or scantling, and across these at the distance of a foot and a half are small poles, or even large brush, and on this a covering of rye straw or prairie hay, but not so thick but that the sun comes through the interstices of the straw, giving just a faint appearance of sunlight, similar to that of a rather dense frost. Between these rows of posts the plant beds are made six feet wide, and the plants, which are six to eight inches high, bedded in them, the sides are left open for a free circulation of the air. They are watered occasionally as needed, with a garden engine, by carrying the hose under the shelter and sprinkling with a rose. The heavy rains of course wet them thoroughly, but the cover arrests the dews and light showers. When a large quantity are thus treated, it would be better to have a good well with an abundant supply of water, and with a force pump send the water through India-rubber hose to the places required—say three to four hundred feet. The plants are to remain in these beds two years: the second year the cover will become thin, and only will need little more than to look after the weeds and an occasional watering. Of

course, when exposed to the winds the covering of straw must be kept on by small poles or brush over it. Last spring they bedded out some seventy thousand plants, and most of them are doing well. We noted among them Black or American Spruce, Balsam, Hemlock, Arbor Vitæ and Red Cedar. The last named from Union county in this State, and the others Mr. O. personally attended the gathering himself in the north part of Wisconsin. We are thus particular, for most people lose a large share of their young evergreens by exposure to our hot sun and drying continental winds the first season after setting them out on the prairie. We have been successful with putting them in the shade of other trees and protecting them from the sharp prairie winds, but the plan of the Messrs. O. & M. is doubtless the best under all circumstances, when we consider growth and acclimation. Their loss is about ten per cent.

EVERGREENS FROM SEED.

They have planted about seventy dollars worth of European evergreen seed under this same protection, but without success, and some two hundred Norway Spruce plants is the result. The seed was sown in a black loamy soil made up into seed beds. We should have stated that for the convenience to water these evergreen beds are located on the lower grounds or the black mucky loam. The seed requires sand, and hence the failure.

GREY WILLOW.

The want of timber on the prairie has been felt by all, but to grow trees and transplant from the nursery has been more expensive than many can afford; it is true the cottonwood, would grow readily from cutting and make a rapid growth, yet the wood is of little value and it also affords a good harbor for insects. In the grey willow we have a rapid, clean growing tree, valuable for shelter from the winds, good for rails and fire wood; added to this it can be grown from cutting at a more nominal rate. It is well known that charcoal for powder is made from the willow, and it is this same grey willow that is used at Wilmington for this purpose, on account of its rapid growth and valuable qualities. For fire wood alone we think it will pay to plant it. The grain is straight and it splits freely into rails, and when laid up from the ground must prove durable. They have some trees four years old from cuttings eighteen feet high and five inches in diameter, six inches from the ground. Thus it will be seen that it will soon make not only a

shelter from the bleak winds in a short time, but also material for farm purposes, or to be more explicit,

"In summer shade,
In winter fire."

We would not place it in advance of our silver leaf maple, but for a cheap, quick growth shelter it is among the most valuable that we have seen, and when we take into account that the cuttings are sold at the low rate of three dollars a thousand and that the tree will grow on high or low prairie, certainly no farmer need longer have his buildings and house grounds stand out unprotected from the keen winds of winter. A belt of these willows guard an

ARTIFICIAL FISH POND,

Fifty by one hundred feet scooped out of a low place in the prairie, and which is supplied with water from the mole drains, running through the depressions of the prairie swells. The pond is six feet deep and stocked with cat-fish, some of which are now fifteen inches long—bass, silver-sides, perch and horse-fish. The Messrs. O. & M. are large growers of Osage plants, fifty acres of which they have in fine order. The seeds—forty bushels—were soaked in this pond for several weeks, and planted at the time of sprouting. Thousands of our prairie farms can have just as good ponds with a trifling outlay, and which will at the same time furnish an abundant supply of water. Until we saw this pond we had no idea that such a luxury could be had upon our own farm, but now we are positive that it is of easy attainment and the thing must be done. The earth must be either wheeled or hauled out, and this must be done in winter or other leisure time; a small hand pump will be needed to keep the water out while excavating the pond.

OSAGE HEDGE.

To Messrs. O. & M. much is due for the introduction of the Osage for hedging. They have grown large quantities of the plants, at the same time they, like others, did not fully understand the habit of the plant, and hedging made poor progress, and most hedges have been turned out in bad order, but now it is better understood and we have some fine hedges. They are now pursuing the plan laid down by us three years since: that is to plant close, say four inches apart in a single line thoroughly cultivated for two years without cutting back, and then to cut to the ground, when the hedge will be ready to turn out in two years more. It can then be trimmed or

not, just to suit the fancy of the owner. We saw a fine hedge set in June, of plants returned to them as worthless. These were soaked in the pond for a week and then set out, and the hedge stands as pretty as any that we have seen. We mention this to show the value of soaking the plants before setting, when they have become partially shriveled by long exposure in shipping. Had these plants been set after their return without this precaution, few of them would have grown. As it is, they will in four years, make a fine hedge, and at a cost, we think, of less than fifty cents the rod.

SORREL ON STRAWBERRY BEDS.

Mr. O. called our attention to the sorrel that had been received among his strawberry plants, and which would in a short time ruin the beds. He considers it the worst weed that we have for this crop, and would warn all planters to guard against its introduction. On new land it grows with great vigor and will soon run out the plants.

THE DIOSCORA BATATTIS.

Three years since they set out three thousand cuttings of this plant, nearly all of which grew. They are nearly hardy, killing back but little.—at the end of two years they are dug, when the roots are of fair size, but of little value for food.

THE LAWTON BLACKBERRY,

Here, it is pretty well loaded with fruit, though not protected, with slight shelter it promises to be valuable.

THE ORCHARD

Is trained with heads three to four feet from the ground and is located on a northern slope, but it is yet too young for bearing. The whole grounds are new, say four to five years, and contain over two hundred acres, which in a few years will be one of the establishments of which Illinoisians will be proud.

TIMBER BELTS.

Soon after dinner Mr. O. gave us a ride behind his mules to the farm of Mr. Osborn Barnard. On the way we passed the farm of Mr. J. H. Fell, who is well known for his interest in tree planting. For timber belts he uses the silver leaf maple, and sets them in rows eight feet apart each way; three of these rows make a good belt, and occupy on forty acres of land four acres; but this land is not lost, as by planting eight feet he will have a good growth of blue grass for winter feed for his stock, or he can

grow the Lawton blackberry or Black Cap raspberry to good advantage. These belts are now in corn, so that the cost of culture is but a trifle more than that of an ordinary crop. Another year's growth of the maple will put an end to the corn crop.

STATE NORMAL UNIVERSITY.

This being in our way we spent an hour in the natural history room, in admiring the fine specimens of birds put up by our friend Holder, and the extensive collection of rocks, coals, etc., by the industrious Wilbur, and the fine painting of the young artist, J. E. Bryant, nephew of our illustrious poet of the same name. Mr Hovey was absent at Washington arranging for a regiment of teachers and students to fight the battles of his country.

A TWENTY ACRE FARM.

The only entry of a twenty acre farm was that of Mr. O. Barnard near Bloomington. The farm contains in all twenty-five and a half acres less the highway on one side and a lane on the other, and is occupied as follows :

	ACRES.
Corn.....	9
Spring Wheat.....	5½
Oats.....	½
Meadow.....	2¾
Orchard.....	¼
Road and yard.....	1
Potatoes.....	6
Total.....	25½

Five acres of the corn land was in corn last season, plowed a foot deep and heavily manured, most of the manure hauled from the city. The other was a pasture field previously manured.— On one corner of the five acre lot four loads of gass lime had been spread, last year the crop was not as good on it, but now we can see no difference between it, and that treated with manure. The pasture land was plowed eight inches deep. A single mole drain had been run through the five acre field, and along its track the corn was much the best, the line of drain could be easily seen in looking over the field. The whole nine acres presents an immense growth. The corn is drilled in rows about three feet apart and cultivated with double shovel plow and cultivator—flat culture and all weeds destroyed. The potatoes are very fine. The land was manured and plowed deep—rows three feet apart, hills one foot, with one eye in a hill—cultivated with shovel plow—variety mostly Neshannock; uses large potatoes for seed. The wheat crop was exceedingly heavy in the straw, but the berry was not well filled.

THE MEADOW

Is a mixture of timothy and clover, was very heavy, having been top dressed after harvest last year, seven loads of well rotted manure to the acre. From our experience and observation we think a top dressing of manure immediately after the hay has been taken off the most valuable treatment that can be given a meadow, it answers as a mulch to protect the exposed roots from the sun, and on the first rain they afterwards spring up with wonderful vigor and can be either pastured or again cut for winter use, though we should prefer the former. We cannot too strongly recommend the top dressing of meadow lands at that season of the year, at that time the ground is hard and is not injured by driving on it. We would prefer well rotted manure.— The hot sun of July and August often destroy or prevent the after growth, but with even a light top dressing we have always formed a good after growth.

THE ORCHARD

Has been set four years and begins to show a few specimens of fruit. The varieties were not well selected for a family orchard and will need be extended for this purpose. An orchard of this kind should contain a good proportion of summer and autumn fruits adapted to cooking; it is a mistaken notion that we need most of the table sorts. Such apples as the Keswick Codlin, Holland Pippin, Yellow Belleflower and Stannard cannot well be dispensed with in the kitchen, so long as apple pies, dumplings and tarts are great staples of health and good living. The orchard has made a vigorous growth, having been cultivated in low hoed crops, this season in butter beans for the city market. The orchard contains sixty-two apple, a few pears and plum trees. On the west side is an Osage hedge and a belt of forest trees about two rods wide, on the east and next to the house grounds a screen of arbor vites which in a few years will add much to the beauty and value of the place in breaking off the southwest winds of winter from the building.

THE GARDEN

Is among the best, and contains all of the small fruits, with an ample supply of vegetables, and is under the more immediate charge of Mrs. B., not that she does all the labor of digging, planting and weeding, but directs and superintends its management. The crop of currants, gooseberries, raspberries and grapes would make glad the family of man a "large farmer."

THE FRONT YARD

Is set in blue grass and more or less planted to evergreens and small flowering shrubs and plants.

THE FISH POND,

Near the northeast corner of the farm is a small rush pond; this is being carted out and the muck spread upon the upland, and thus far with valuable results. This pond, when thoroughly cleaned out, will form a valuable fish pond, and at the same time supply water for the stock.—The subsoil at this point being a rather tenacious clay, is well adapted to mole draining and will thus supply water to the pond in sufficient quantity for the above purposes. The farm is divided into three fields, and this season will afford no pasture, and the stock is pastured on an adjoining farm.

THE BARN cost about eight hundred dollars, and is divided into stables, granaries, toolhouse, carriage house and threshing floor. The hay and grain is stored overhead. For a farm of this size it is exceedingly convenient. The house cost about fifteen hundred dollars, is of wood, with a good stone cellar with cement floor; the well and cistern are supplied with excellent pumps, and everything is arranged for comfort and convenience, and we have no doubt that three women in this house can accomplish more than four on the average of our farms. The style of the furniture and of the living is that of the wealthy class of our city families, and this from the twenty-five acre farm.

THE STOCK consists of four brood mares that do the work and this season raised three colts; these are bred from the best horses, and of course bring a high price; in fact, is one of the main points from which the profits are drawn. One cow is all of the horned stock, but this is none of your cheap kind, she is a milker of the first order, and supplies the family with an abundance of milk and butter. Eleven head of aged porkers are this season deprived of their usual pasture and depend on weeds and corn for forage, but they appear to have a good time, judging from the amount of fat they carry. They include Berkshire and Graziers from the stock of Mr. Crowder, of Sangamon county, with two or three of the Polands. The quantity of poultry is small, much less than would prove profitable. The fences are of board and post, with some young hedge too young to turn out. On the farm are several hundred rods of underdrain, part of it mole and part made of boards and filled in with

earth. Wherever these drains occur we can see a marked difference in the crops. No weeds are allowed to grow on any part of the farm, and now after five years the seed seems almost exhausted, and the crops are easily tilled, though one hundred loads of manure is hauled from the city and used for top dressing in addition to that made. With the aid of one hand for six months Mr. B. has done the farm work. Last year his sales amounted to over seven hundred dollars; this was for colts, pork and farm products sold not estimated.

The farm cost originally forty dollars an acre, partially improved, and the improvements must have cost about one hundred and twenty dollars per acre more, and the stock, tools and furniture another thousand, making an outlay of about five thousand dollars. The farm is three miles from the center of the city of Bloomington, and of course just in the suburbs; in fact, Mr. B. is a suburban farmer, with an abundance of means aside from his farm, and of course is under no obligation to do more than he pleases, or to make his living exclusively from his well tilled acres. He was formerly a large farmer in Ohio, and of course a slave to his hundreds of acres; inured to a farm life he would be lost in any other employment, nor could he be satisfied to rust out in inglorious ease. He therefore wisely selected the number of acres that he could till with his own hands, and without making his wife a kitchen drudge, as is the case on most large farms. We do not hold this farm up as a pattern for the farmer of limited means, but to show that there is more real profit and enjoyment on a small well tilled farm than on the larger ones. The nearness of market and the judicious selection of the crop have had much to do with the success, so of a liberal supply of manure from the city that has only cost the hauling.

A forty acre farm would more nearly suit our views of a small farm outside of the city. This would afford pasturage, and for the majority of small farmers with large families be more desirable. We cannot close with this farm without remarking that we have never seen a farm of its size managed with the same economy of labor, nor so many of the comforts and convenience for a family of five persons so ample and so well arranged, procured by their own labor as in this case. Truly the small farmer is the *independent farmer*, while the "large farmer" and his family are the slaves to their broad acres.

As Mr. B. will make a report of the crops and mode of farming to the Secretary of the State.

Agricultural Society, we will leave the subject for the present.

At six o'clock a. m., of July 26th, we parted with Mr. B. and took the train for Springfield, to examine the

PEAR ORCHARD OF JOHN S. BRADFORD,

Which is about one mile west of the State Capital. The land is rather too flat for orcharding, and liable to damage from late spring frosts. Mr. B. has a plat of ten acres forming a desirable suburban residence upon which he has placed a fine residence and ample out buildings, and during the hours of relaxation from active city business he has made a small paradise, redolent with rural beauty and the substantial of good living.

The soil is a clay loam with rather a retentive sul soil, but the whole is underdrained with brick tile to the depth of two and a half feet (too shallow—should have been not less than three feet,) at a distance of twenty-four feet, which, on the whole makes pretty efficient drainage. We wish that every farmer in the State could see the rank growth of corn and vegetables on this underdrained land, with ordinary culture and without manure, we think they would open their eyes a little, and possibly conclude that tile and the spade are equal to a *little more land*. The dwarf pears are set eight by twelve feet apart, a part of them were two, and the remainder three years old from the bud when set, and have been set four years, and they number four hundred and fifty trees. Of course, on this soil, and with the culture they have received they are very thrifty. The trees were from the same nursery, of the same quality and procured at the same time with those of Mr. Yates at Tamaroa. They are now larger and more vigorous than the latter, which is to be attributed to the effect of the perfect drainage. Mr. B. has cropped his grounds to corn or vegetables, while Mr. Y. has cultivated the trees only. We prefer the cropping, especially in corn, but would not plant nearer than four feet to the tree; leave the stalks standing until spring and then plow them under. The corn protects the tree while growing from being swayed over to the northeast, and in winter modifies the sudden changes. In this orchard, like that of Mr. Yates, there is a large percentage of varieties that appear to be of little value with us. The Bartletts are, as usual, well loaded with fruit, notwithstanding the complaint of late frost. The same may be said of Swan's Orange, Louise Bonne de Jersey and Madame, while Stevens' Genessee, Summer Belle, Beurre Diel and Win-

ter Nellis have a fair show of fruit. The same worm that disfigured the fruit in the orchard of Mr. Yates is also here, but to a much less extent. The trees are very healthy, and with the single drawback of topography give promise of rich returns. The underdraining will to some extent modify the effects of spring frost and another season we shall hope to see the whole orchard loaded with rich clusters of melting fruit.

DWARF APPLES.

Mr. B. has two hundred dwarf apple trees in the same grounds, set at the same time with the pears. They have made a fine growth, but as yet show no fruit. Certainly with the treatment given, the dwarf apple on the prairie thus far has proved a failure.

It is now Saturday, and we leave for home, after looking into the publication office of the ILLINOIS FARMER, over whose threshold we have not passed since late in December last. The publishers, the clerk, and the old foreman, are here, but the old familiar faces of the typos are not—gone to the war to a man—and their places filled with new hands, some of them we have seen in other offices, but to most of them we are a stranger, and now when in our sanctum, eighty miles away from the busy fingers that put our thoughts in type and send them out silently to thousands of homes, we cannot but reflect upon the mutations and uncertainties of human life and human destinies, the madness of the South that is thus taking from the useful walks of life, hundreds of thousands to guard the eagle of liberty and to throw over our homes the blessed boon of a free and intelligent government. In our journeyings of the week we have been greeted at every turn with military preparations, and at times we have almost been led to distrust the value of our commission, but when we look to the thousands of homes that stand out in the glare of the noonday sun, when we see thousands of children playing at the roadside and on the shady side of buildings, when we see great corn fields flanking and enclosing the dwelling and usurping the garden, when we see the pale faced mother at the window around which cluster no vine nor smiling flower, and the yard grown up with noisome weeds—when we see the well but a sink hole at the edge of the slough—when the cistern is but an old barrel, warped and distorted in the sun—when the farm tools are unhoused and the stock depending upon the friendly shelter of a worm fence, we feel that there is yet a mission for us, and that the agricultural

society are wise to pursue their onward progress and continue to hold out awards for the improvement and the beautifying of our homes.

July 29th. A day of rest after a week on the cars and in rambling through orchards and over large farms, is a luxury, as well as a necessity. Were it not for this seventh day we would have no stopping places in the journey of life, no breathing spell, no enjoyment of the beautiful, but a tireless task like the continuous running of a river. Surely the Sabbath was made for the farmer, that he could rest him from labor and admire the handiwork of the Creator, whether in the waving branches of the leafy forest that sends forth its grateful shade to shut out the heat of the summer sun, or shield him from the winter blast.

Our course is now northward, where Michigan comes to grasp the commerce of the West; rough in her boisterous moods, but now placid as a sea of molten glass, she sends forth no cool breeze to kiss the land or the brow of labor, and along her shore the ardent sun pours out his heat as from a furnace, sending the mercury in the shade up to a hundred, and putting a premium on the ice that the winter king had wisely provided for the occasion. Shade and ice to ward off the heat of the summer sun, and belts of forest to shelter us from the winter wind. The tree planter has a task before him, but it is a pleasant one, nor should there be any laggards among them.

July 30th. At eight o'clock a. m. all of the number of the committee took seats in the cars of the lake shore road for Waukegan, and at Evanston were joined by Mr C D Bragdon, the western editor of the *Rural New Yorker*. A pleasant ride of two hours along the forest skirted shore of the lake, passing several pretty suburban towns we were duly set down at Waukegan, the "Little Fort" of the olden time. Here the butting cliffs encroach close on the lake and upon which stands the beautiful city of Waukegan.—Years ago, before grey hairs had invaded our brow, we had spent a week's fishing on the shore and had wandered through the forest aisles where now stands the city, but a few years ago and this was a part of the unbroken forest that swept up the Chicago river and joined hands with the vast wilds of the north. Now we have broad, well paved streets, lined with stores and shops, and out of the din of business hundreds of residences surrounded with the waving drapery of forest and floral verdure. Certainly this city, in point of picturesque beauty, is not surpassed, and for

the luxury of fruit and beautiful homes has few equals. At the end of one of the main streets leading north, we come to the beautiful grounds of Robert Douglas, graceful walks of the lake gravel winds among magnificent conifers, pears and dwarf apples loaded with fruit, flanked with shrubs and flowering plants, occasionally relieved with a patch of lawn with its closely shaven blue grass carpet. It is a fairy picture, a commingling of the useful and the ornamental, all draped in beauty. No professional landscape garden had a hand in this—it was designed for use—but it has grown up a place of beauty. The specimens of Austrian, Scotch and white pine standing singly on the lawn and in front of the house are among the largest specimens in the State, while the Balsam and Black Spruce from our northern forest are unexcelled; in fact, one specimen of the American Black Spruce, twenty feet high, cannot be surpassed by any of the European Norways, its drooping, graceful branches can but challenge the admiration of all. A few years since the grounds were covered with a heavy oak forest, but this was cleared off and the stumps grubbed out, the surface leveled, walks laid out and the grounds planted. To the east is the lake, now presenting its peaceful mood as it reflects the sun, with the thermometer at 97° in the shade, to the north and west the forest is driven back a mile, but not so that its kindly influence is yet felt in winter and early spring—Never have we seen grounds more conveniently planned and so well planted as these. Walks bordered with fruit and flowers, clumps of conifers, of pears, and of dwarf apple, fringed with small fruits. Among the pears, Bartlett, Louise Bonne de Jersey and Flemish Beauty, are the favorites, and well they may be, for they are loaded with fine specimens of melting fruit. The cherry slug has been somewhat annoying, on both cherry and other trees. The remedy is simple: Sprinkle the trees in the middle of the day with dry dirt, simply dust it on the leaves infested, the dry earth adheres to the slimy coat of the slug and kills him. Some specimens of the native larch are very fine, but this we think due the sheltered situation, and we would not recommend their planting when the European can be obtained, as they are in all respects much more desirable. A small shrub of the Japan Quince is loaded with fruit—a rare occurrence in this part of the world. The yellow Siberian crab should oftener find a place in our ornamental grounds. The tree itself is beautiful in form, in foliage, in bloom and in fruit, presenting through

the season in all its changes a succession of beauty, to say nothing of the value of the fruit.

DWARF APPLES.

It would appear that, notwithstanding the dwarf apple does not fruit well on prairie soils yet on the timber lands they promise better, if we take the numerous specimens in these grounds for proof. Among them we note Twenty Ounce, Waggoner, Early Strawberry, and the Baldwin, in this clump of trees, completely sheltered, as it is proven a profuse bearer. Mr. Douglas suggests that the mode of setting the dwarf apple may have something to do with its productiveness; he says that the stock of the dwarf apple, like that of the pear is tender and needs the same treatment, that is, the stock should be below ground, yet not so deep that the graft will take root. If the stock is above ground the winter frost will so weaken it that the tree will cast its fruit or not set any fruit buds, and if set deep will root from the graft and the tree will then no longer be a dwarf. It is possible that there may be much truth in his suggestions, for we know that in setting out dwarf apples little regard has been had to these points. The dwarf pear came near proving a failure with our Western planters from the same cause, and now we are careful to plant them so that the junction of stock and graft shall be just below the surface of the ground. The apple trees of Mr. D. have been set five years and have produced large crops of fruit. We think those on timberland by regarding the above hints may feel a reasonable assurance of growing fruit on the dwarf apple, at the same time we would feel safe with the Keswick's Codlin, Yellow Injestree, Summer Rose, Red June and Hawthorne, treated as dwarfs and planted in clumps, thence with the ordinary selections of dwarf apples. The above are early and abundant bearers, have a dwarfish, compact, symmetrical habit and are valuable for cooking. To these we might add Red Astrachan and Dutchess of Oldenburg, whose space was abundant, and a large quantity required. The dwarf apple mania has had a good run at the West, but thus far without satisfactory results.

THE HOT WIND.

About the middle of June the wind blew a gale from the southwest for two days; it was hot and dry and crisped up the leaves of forest and other trees, and in many cases killed the tender shoots. Its effect is visible in all directions on the south and west sides of tree and shrub of all kinds.—

The fruit has been also materially lessened in both quantity and quality, those most exposed more seriously than those under shelter.

THE LAWTON BLACKBERRY.

In the grounds of Mr. D. this fruit maintains its eastern reputation, and the cones are loaded with fruit, just beginning to change color. They evidently have shelter even here on the lake shore and in timber land. Mr. D. has an acre or more set out for fruit, from which he will reap a rich harvest, and so well is he pleased with them that he is intending to extend his plantation. They need winter protection and shelter from the winds, when we think they will prove valuable. A light covering of straw thrown on them is all that is needed; this, of course, cannot cost much and will be well repaid in fruit.

THE DORCHESTER

Is doubtless a great humbug, notwithstanding the endorsement of the Massachusetts Horticultural Society. Here are plants from a celebrated Boston house. A part of them have strong green cones, with small fruit of little value, and a part have red cones with the smallest fruit, the whole doubtless picked up by some arrant wag who named them Dorchester and imposed upon the good natured members of the society.

In these closely planted borders the Michania stands the winter and appears healthy, while many other half hardy plants are quite at home. The Horse Chestnut is a fine tree along the lake shore and should be more planted.

The gem of the place is a hedge of red cedar separating the house grounds from the fruit garden and nursery, one of arbor vitæ to the north of the house, two years set, promises to rival it. Mr. D. has made a free use of evergreens for his shelter. To break off the northwest wind a line of white pines were set some years since about four feet apart; they are now over twenty feet high and form a wall against the winter blast, when the foliage has dropped from the clumps of deciduous trees, and they no longer hold it in check; just think of it, a belt four hundred feet of a hundred trees costing fifty dollars for plants and labor, why you could not purchase it after ten years set for ten times the amount, for while it is at all times beautiful it is eminently useful.

CURRENTS.

Mr. D. has a large number of the white currants set in the shade along his borders, and at this time they are loaded with ripe fruit,

the shade delaying them some two weeks. We have never seen so fine a show of this fruit, and even here on the lake shore shade appears to be of value to them.

THE HOUSE GROUNDS,

Proper, occupy about five acres, and while they are most attractive to the eye they are also useful, and return to the owner several hundred dollars of solid cash, annually. The fault with our landscape grounds is the intensely ornamental, ignoring the useful, giving us leaf and flower, but we have yet to learn that a Siberian crab is less valuable if after the spring clothes it in gorgeous floral beauty and the summer robes it in richest verdure that the autumn may not drape its branches in clusters of valuable fruit. We like this commingling of the ornamental and the useful, and we would not have them separated and a hedge set between them. To those about to plant extensive grounds we commend those of Mr. D. to their consideration.

EVERGREEN SEEDLINGS.

Mr. D. has been very successful in growing the evergreen seedling. The beds are made of sand and sladed with frames of lath four feet square, the opening being about half an inch, using inch wide lath. These frames rest on stakes about eight inches high, allowing the wind free access under them, after they are up and out of the way of the cedar bird, who is very fond of them while young; it keeps him out; boards are put to the sides of the beds until about the middle of June. It will be recollected that Messrs. O & M. failed to grow seedlings on common prairie soil, and we believe others have had indifferent success; this has been the case with us. We see no reason why we may not succeed with the use of same as well as Mr. D. Although a long drouth has effected many other plants, yet those seedlings do not appear to suffer in the least, although they have not been watered at all.

PEAR SEEDLINGS.

In these Mr. D. has not been as successful as he desired. He sowed a large quantity of imported seed, all of which came up well, but in a part of the grounds a liberal supply of manure was used, and the white grub has destroyed them by the thousands. In the unmanured ground the stand is good, and the plants are very firm. Pear seed should be sown on virgin soil deeply subsoiled and thoroughly pulverized.

DWARF PEAR ORCHARD A D.

The dwarf pear orchard numbers some one thousand trees, four hundred of which are in bearing. The leading and most profitable varieties are: Bartlett, Louise Bonne de Jersey, Seckel, Glout Morceau, White Doyenne, Swan's Orange, Madeline, Stevens' Genessee, and Winter Nelis.

The truth is, that one-half of the dwarf pear trees in this State are of no value, and never will be, for the simple reason that the varieties are not adapted to the soil and climate. We hope planters will take lessons from substantial facts, and in making out orders for trees, will order what they want. It is better to pay a hundred dollars for a hundred trees that will bear good crops of fruit than to take a medley of varieties, two thirds of which may prove worthless, even if they are purchased at half price. So far as our observation extends there are a few varieties that prove hardy and reliable bearers, while the great number of varieties are to us worthless.—These varieties appear, with limited exceptions, equally valuable in all parts of the State, and of which we shall have further occasion to speak.

THE STANDARD PEAR ORCHARD.

Among standard pears the Flemish Beauty is esteemed by Mr. D. the best of all, and right well does it maintain this character. Tree but half a dozen years set producing five bushels of fruit each. They appear to vie with the Keswick Codlin in early and abundant crops. The standard orchard entered for the premium contains one hundred and fifty trees set ten feet each way, and treated as dwarfs. They consist of Bartlett, Flemish Beauty and White Doyenne, these latter having the tops regrafted to the Flemish Beauty. The trees have been four years set and have made a remarkable growth. There can be no question that this style of growing pears is the true one, though the distance apart is doubtless too small. They would be readily taken for vigorous growing dwarfs. The soil is a rather stiff clay loam, thoroughly underdrained, which is the case with a large part of Mr. D.'s grounds. The orchard is planted to the Lowion blackberry, now in the second year, and well loaded with fruit.—At present these fruits agree pretty well, but in three or four years we suspect the pear trees will require all the space. It will be seen that Mr. D. has selected but two varieties for his standard orchard, having by regrafting the White Doyenne placed that variety out of the list. There can

be no question as to the correctness of this choice, taking a series of years together; both are vigorous growers, abundant and sure bearers, and both of the best quality of strong fruit. Were we to add to the list we would include Stevens' Genessee, Louise Bonne de Jersey and Fondante d'Automne, and for winter, Winter Nelis.

THE NURSERY

Grounds of Mr. D. contain thirty two acres closely planted. Dwarf and standard pears, the small fruits and evergreens are the leading staples, though a liberal space is given to the floral department, when the dahlia and peonia stand at the head, and are rather specialties.

We next visited the pear orchard of

A. S. SHERMAN.

Mr. S. purchased the grounds some half a dozen years since. It then contained twenty-five dwarf pears then six years set, making them now twelve years from the setting. Most of these are Louise Bonne de Jersey, and now loaded with fruit. The trees are large and vigorous. They stand upon the summit of a pretty high ridge, with good natural drainage and protected on the north and west by a large apple orchard, building and shade trees.

BOULDERS FOR MULCH.

These large trees are mulched with a liberal supply of granite boulders, which protect the roots and maintain the trees in place. Mr. S. has five hundred dwarf and standard pear trees and all of them have this rock mulching. The newly set trees first receive a good coating of straw or prairie hay, and as his stock of boulders were exhausted by the large trees, he uses quarried stone to place about them. From the very vigorous growth of his trees we must infer that this treatment is of considerable advantage, and we feel disposed to recommend it when the stone can be readily procured. His young orchard is set eight by twelve feet, half dwarfs and half standard, and set alternately. Among the standard is one hundred and fifty of the Flemish Beauty, and one hundred and twenty-two of Louise Bonne de Jersey, almost the entire amount of the standard. When we consider the multiplicity of new pears and the desire for novelty we may consider our Waukegan friends a little old foggy in their adhesion to old and well tried friends; the result is plenty of fruit, while those who run after novelties have plenty of trees such as they are.

BARK LICE.

The bark louse had become so abundant on the apple orchard of Mr. S. that fears were felt of its destruction, and it became necessary to look after some effectual remedy. Mr. S. uses linseed oil and tar in equal quantities. These are mixed over the fire by a gentle heat to dissolve the tar. This mixture is put on with a brush at any time during the winter or early spring and has the appearance of a varnish. It has the advantage over the alkaline washes used on the young insects, that it can be applied to all parts of the tree without the least injury to the shoots or buds, while it is death to the insect. His trees are nearly free of the insect and have become vigorous and fruitful.

THE LOMBARDY POPLAR

Is being used by Mr. S. for a belt on the outside of his orchard shelter. They are of rapid growth and easy culture, requiring only cuttings set three feet apart and cultivated for the first two years, when they will have become well established. Mr. S. has planted a part of his pear orchard to strawberries, but we apprehend that he will not find them a desirable crop, better put in small hard crops.

Waukegan abounds in fine gardens, but we had no time to look through them, as our official duties would require all the time that it was possible for us to devote from home at this season, and with some regret we parted company. Mr. Bragdon was booked for a tour in Wisconsin, and Mr. Chase was compelled to return to Chicago, while Mr. Hull and myself took the down train for Winetka, to examine the

TRAN PLANTED FOREST TREES

Of Mr. Charles E. Peck. Mr. P. has twenty-two acres which last year was dignified with the name of farm, and upon which he received the first premium for the best farm of twenty acres. If twenty-two acres, surrounded with an expensive rustic fence, ten of which is laid out into park and twelve of it into the most beautiful ornamental grounds, with its miles of graveled walks and thousands of ornamental trees, plants and shrubs, with a mansion and out buildings costing sixteen or seventeen thousand dollars, is a farm, then this is one, but not such as should be recommended for the small farmer, unless his rent and bank account was more ample than that of most small farmers. We have a curiosity to see the report of the committee and to learn something of the working and culture of this farm.

No man better understands the culture of the soil than Mr. P., for no such suburban home has been carved out of the forest belt that fringes the lake as this. There are more costly buildings, more ornate enclosures, but for gems of forest beauty we can safely challenge the West. Consider of the most symmetrical and vigorous growth, elms, maples, ash, linden and other deciduous trees presenting such a wealth of foliage that we suspect that they had no relationship with those of the primeval forest. Yet such is the fact, for five years since they stood under the shade of the parrot tree and were torn from their home and transplanted to the broad lawns that they now so proudly grace. We have but to carry the reader back half a dozen years to show him this place with its tangled bush wood and forest of lofty oaks, on the high ground, with giant black walnuts, lindens, ash and water oaks at the front of yonder slope, where the dripping from the upper "steppe" had formed a morass over whose treacherous surface it was dangerous to drive. The timber was cut down and sent to the city for wood, the stumps dug out, the surface leveled and miles of underdrains laid deep in the soil. The trenching spade was used with no stinted hand—walks were laid out, trees 20 feet high brought from the open woodland and set out, the choicest and largest conifers were purchased without regard to cost, the lawn was sown to blue grass and the borders set with shrubs and plants, and thus five acres were devoted to the beautiful. On the remaining seven stand the family mansion, a house for the hired help, a carriage house, barn, and extensive sheds, a magnificent young orchard and extensive fruit and vegetable garden. All of these are well averaged and kept in the most admirable order. The underbrush was cut from the remaining ten acres, the surface leveled and sown to blue grass. In this woodland was a small slough, the muck from which has been hauled to the barn yard and composted with manure, with which to dry the lawn and to stimulate the orchard and the garden. In a short time the slough will be a fish pond, swarming with fry for breakfast. Call you this a farm, from whose willing surface you could clothe and educate a family and lay by sufficient to set up the young people in business when they leave the parent hive? we think not. It has one of the first elements of a farm—underdraining and a valuable fruit and vegetable garden; the lawn supplies the hay and the park the pasture, and in this respect it might be called a grazing farm—for aristocratic cows.

But Mr. P. is a farmer, and has a fine farm a short distance to the west, on which he has some of the best stock in the State. At this point the lake comes up to a bold shore some forty feet high; for the next eighty rods the ground is very level, though gradually rising some ten feet for ample drainage, then we have a rise of thirty feet in the hundred to the upper land, along which runs the railroad, and from which you can look out on the broad expanse of water.

THE ORCHARD

Is set with alternate rows of standard and dwarf apples, and though on land somewhat similar to that of Mr. Douglass who is successful with the dwarf apple, yet they have not succeeded well here. The trees are remarkably vigorous, but as yet show little fruit. They are four to five inches in diameter. At the same time the standard trees set with them are yielding good crops. Among them the Duchess of Oldenburg and Keswick Codlin are great summer favorites. We can only account for this freak of the dwarf apple upon the hypothesis of Mr. Douglass, as mentioned in this connection. On the west the grounds are protected by the park, and on the north by the old forest, and are partially open to the south and east. The good taste of the people having saved from the axe numerous specimens of the old forest, which gives to the village a rural beauty most desirable.

THE FENCE

Is a rustic picket, posts and scantling put up in the usual way, only higher, as the fence is six feet high. The pickets are round saplings not less than one inch at small end nor more than two at the large one. These are cut in summer when the bark will peel, are stripped of the bark and nailed on while green. At that season of the year they soon become dry and hard as a bone, and make a very strong and durable picket. As compared with pine or other sawed stuff they are more durable, strong, and in better taste for grounds of this character, most especially about the park, and we take the occasion to commend it in place of the old worm rail fence about all woodland pastures.

THE BIRDS.

In all orchards near the woodland we hear doleful complaints of the birds depredating on fruit of all kinds, and here they appear particularly troublesome, the raspberries and currants are spirited away and the early apples are bored

into. There appears no other way than to grow a supply for them.

GRAPES.

In the garden of Mr. Willson, near by, we saw some of the most vigorous vines of the Isabella that we have seen, and such branches of fruit in the open air we did not suppose possible. We could hardly believe our eyes, yet here was the fruit, color and form of the leaf of the tree Isabella, but the size of both fruit and leaf staggered us. Mr. W. would not admit more than underdraining and the spade in his culture. If this is true we would advise vineyard culture along the slopes of these lake steppes, for the genial hills of Cincinnati are no match for them. The soil is a clay loam, friable and yielding in its composition. Mr. W.'s fruit trees are loaded with fruit beyond anything we have seen. Certainly there is some advantage of either soil or culture, but our visit was confined to a short morning hour before the leaving of the train. Here in a few rods square was no small amount of grapes, plums, pears and apples, and the finest lot of vegetables, sweet potatoes included. We often hear farmers talk of these retired city folk, as though they knew little of the culture of the soil. But they forget that they are investigating men, and soon dive into the hidden mysteries of deep tillage, thorough culture and composting of fertilizers, and before they are aware they are ahead in size and quality of products. Of course there is a class of city parvenues who affect to know everything, and who really know nothing nor never will.

A ride of four miles brought us to Evanston, at which point we met Mr. H. M. Kidder, of the firm of

KIDDER & KNOX,

And the managing partner of the firm. They have forty-five acres underdrained with pipe tile, all of which is being prepared for small fruits.

THE SOIL

Is a low marshy flat, of the most unpromising description of no great value for grass, and in its natural condition useless for culture, except a narrow ridge near the lake, which is sandy and produces good crops of vegetables when well manured. The fall in 110 rods is but five feet; all the water that falls on the surface must be evaporated or slowly find its way to the North Branch of the Chicago river. The land lies about thirty feet above the lake. The sand ridge before noted

is some fifteen feet high, and at its base for some distance the spring forms a swampy soil which is composed mainly of quicksand, but so soon as we come on to the clay flat, there is little appearance of water even in the deep drains so indurated is this cemented sand, gravel and clay, that forms the subsoil. The farm contains over two hundred acres, forty five of which have been drained. The main drain is sunk four feet deep and is formed of inch pine stuff, with an inside opening of six inches, into this the side drains are discharged. These are sunk three and a half feet, but are kept to regular grades, and in some places are five feet deep. At the distance of two feet is a thin layer of quicksand just under the peaty soil, where the almost impermeable subsoil is met, into which the tile is sunk a foot and a half. The drains are placed four rods apart, which Mr. K. considers ample. During heavy rains an immense amount of water is discharged, but as the soil becomes weathered down, its surface more retentive and the subsoil more yielding, this will be changed and the water more slowly discharged. The tough prairie sod is first broken in the usual manner, and in the following spring the land is plowed eight inches deep and subsoiled to a depth, in all, of twenty-two inches. To give some idea of the solid nature of this subsoil we have but to recur to the level above the lake, which is about thirty feet, and then to state that the well is sunk sixty feet without furnishing more than a moderate supply of indifferent water impregnated with salts of iron. The soil is acrid and will require thorough acretion before it will be valuable for all crops. Of this forty-five acres two acres are set to Brinkle's Orange raspberry, plants set two and a half feet in the rows, and the rows five feet apart. These are making a good growth, set last spring. Ten acres are set to strawberries, five of which are nearly destroyed by the white grub. This part of the ground had been slightly manured. Willson's Albany and Triumph d'Gand are the varieties set. The growth has been remarkably good considering the newness of the soil. Ten acres were set to the American Black Cap raspberry last spring, but from some cause, probably from late setting, a large share of the plants failed to grow. Twelve acres were last year set to the Lowton blackberry, and which have made a moderate growth. An acre set to rhubarb has made a remarkable growth, the soil appearing to be well adapted to it. On this soil potatoes thrive, but corn is no favorite.

In working his grounds Mr. K. uses a one-horse subsoil plow and esteems it highly. It

must be of great value in strawberry culture to loosen up the soil after the heavy rains of winter and spring. Mr. Knox is a resident of Pittsburg, Pa., and does an extensive business in the growing of the small fruit shrubs for sale, and is well known throughout the west in this speciality.

That they will succeed we have little doubt, though we think they have not made the best selection of soil for their experiments, but they have gone to work with an energy that will accomplish success.

A STRAWBERRY PATCH.

On the western slope of the sand ridge before alluded to, Messrs. K. & K. have seven acres of bearing strawberry vines, all Willson Albany, luxuriant as need be. On account of the dry weather at the time of cropping, the yield was light, thus again assuring us that without an abundance of water at that time, that a strawberry crop is not the most certain in the world. The plants are cultivated in drills or hills about two feet apart, the rows of plants covering half the space. They are raked with a horse hoe, and the weeds pulled out of the rows by hand; they are in excellent order, and it would appear, to look at them at this time, that they could not fail of a large crop next season.

On the east, or opposite side of the ridge, divided by the highway, is the experimental garden where varieties are tested; here we had a feast of Brinklys' Orange, Yellow Antwerp and other raspberries. The Brinklys are fast gaining favor and as they produce an abundant crop with slight protection will soon be among the common garden staples of good living. Before we close with the subject we will say that many varieties of small fruits can be had of this firm at low rates, especially of strawberry, raspberry and blackberry plants. Mr. K. has no confidence in the mole ditches for his soil.

To be continued in next No.

BAKED PORK AND BEANS.—Have nice, clean, white beans, put to soak in cold water over night. Take a piece of fat, side pork, parboil fifteen minutes; then place it in the pot with the beans, which ought to have been cooking an hour. Boil the pork and beans together until the beans are perfectly soft, then remove them with a skimmer to the dripping-pan, and make an island of the pork, in the center, having first cut the rind with a sharp knife a quarter of an inch deep, in delicate, parallel lines. Bake three hours in a moderate oven, and serve hot.—*MRS. E. D. KENDALL in American Farmer.*

[For the Illinois Farmer.]

"The Army Worm."

ED. FARMER: I had intended some time since to have prepared an article on the Army Worm for the ILLINOIS FARMER, but a long and severe spell of sickness has hitherto prevented me.

As I desire, in this article, to give a *full account* of my investigations of this insect I may have to repeat in substance some things I have already written; but this cannot be objectional, as my desire is simply to do all I can to aid the farmers in warding off the attacks of this injurious insect.

THE LARVA, OR WORM,

Is the state in which this insect commits all its depredations, therefore we will begin with a description and history of it in this state or portion of its life.

The worms when full grown are about, or slightly over one inch and a quarter long, some of them even reached one inch and a half in length; the diameter of the thickest part is seldom as much as one fourth of an inch. They have sixteen legs placed as follows; six true legs, two placed on each the first, second and third segments back of the head; (by true legs I mean, legs that taper to the point and have claws, and represent the legs of the insect in its future state.) Eight neutral legs (called pro-legs) situated two on each the sixth, seventh, eighth and ninth segments; and two anal legs situated on the last segment; these neutral and anal legs are thick and not tapering, but terminate in broad feet. The color of these worms is not exactly uniform, the ground color varying from a dirty ochre to a very dusky brownish color almost approaching a black; yet through all these shades the markings are quite uniform. I will describe the most common shade. Striped lengthwise thus: Along the back is a broad dusky stripe darkest in the middle, fading towards the borders and edged with black. Next below this on each side comes a narrow whitish stripe; next below this comes a narrow dark or dusky stripe; and next below this comes another whitish stripe a little wider than that just above, this stripe frequently has a reddish tinge or narrow reddish spots, it is immediately above the legs and along the line of the breathing pores.—The underside of the worm including the legs is a pale green; the legs are often marked with dusky spots or rings. The head is equal in diameter to the segment it joins; two dark lines arise (one from each side) from the sides of the

mouth and extend over to the back part of the head; they approach each other in the middle and again recede behind. The prominent sides are light ochreous chequered over with very fine dark lines. There are a few hairs scattered over the front of the head and various parts of the body.

HISTORY.

The history of this species must so far as the past is concerned, ever remain uncertain, on account of the difficulty of separating it from other species. But its future history may be correctly written as sufficient attention has been called to it, to cause correct descriptions and history of its operations to be written and published. That this same species has made its appearance, in this State, in vast numbers at different periods reaching back as far as 1822 there can be no doubt. But from the irregularity in the time of its appearance, from the nature of the insect and those congeneric with it, as well as from various other facts, we may conclude that it has no regular period for re appearance in such numbers. But that on the contrary it appears annually as other species of the family to which it belongs.

The time of its appearance varies with the latitude in which it is found, having appeared in Texas this season about the first of March, in Tennessee early in April, and in this (Jackson) county, Illinois, about the 29th of April, farther north it appeared somewhat later.

The time of its first appearance in any given locality I am inclined to think is quite regular, but the length of time it continues in the larva state I do not think is uniform, and I will give some of my reasons for thinking so. First.—This year although they first appeared on a farm adjoining our town (Murphysboro) about 29th April, yet young ones continued to appear for more than two weeks on the same farm and in the same fields; and when they ceased their operations and descended into the ground to change to the pupa state those of very different sizes as well as ages commenced, at the same time, their transformations. And those that have favorable circumstances surrounding them the entire length of their life in the larva state increase considerably in thickness, and at the latter end of this stage of their life sometimes change color and markings, the lines becoming dim and breaking into dusky patches.

Another reason is that the chrysalides vary considerable in size, the full grown being about

five-eighths of an inch in length or perhaps more, while others are under half an inch long. Though as will hereafter be stated this difference in many instances may be owing to their being different species.

This difference in the length of time they remain in the larva state, as well as the difference in their numbers at different seasons depends much, in fact chiefly upon the state of the weather, the comparative heat and moisture.

And so far as their history is known in this region (which reaches back some thirty years) they have never appeared, in considerable numbers, except of a cold, cloudy and somewhat backward spring; and so far as my observations go, which extend through two seasons of their appearance, it is generally a spring without many late injurious frosts, and with an average or little more than average moisture. This may have been accidental in this locality, and therefore I give it with this restriction simply to call attention to it.

In the *Prairie Farmer* of June 20th, 1861, I estimated the average length of their larva state at three weeks. This estimate I now think was too low, for after more thorough investigation and a comparison of notes with others I am inclined to place the average at twenty-eight to thirty days.

They generally make their appearance in meadows, though this is not invariably the case, for I have known them to appear in yards and grassy plots distinct and at considerable distance from any meadow. That these worms are hatched out in the spring their small size when they make their appearance is sufficient to convince any observer. The next question then will be, when and where are the eggs deposited? I think the "miller" or moth lays them early in the spring (in this region in March), at the roots and on the stems of grass. My reasons for this opinion are as follows: A moth, very similar in appearance to that produced from the "Army worm," appeared in our meadows during last March in considerable numbers. In one meadow in which the worm appeared in vast numbers, the moth was so abundant that the proprietor stated to me that with one sweep of his hat he could catch a handful. In another meadow after the moth had disappeared, and previous to the worms hatching out, a large spot in the field was burned over by means of straw placed upon it; when the worms first appeared in the field none were seen on the burned district, nor did they appear there until they had travelled thither. Again they have been known to appear in ground that was under

cultivation the past season. In some cases they appeared first in wheat fields and when large enough traveled to the adjoining meadow (this was the case on the farm of our County Judge). In many places where there were no meadows they appeared in the wheat fields.

After hatching out they immediately commence eating, selecting out the grasses and wheat which they seem to prefer. When they have attained half their growth, if their food becomes scarce they begin their march in search of a more plentiful region. Generally all marching in one direction, though sometimes a portion of those in a field will march in one direction while the other portion goes in another. Hot sunshine also appears to cause them to move sooner than they would otherwise do. They eat off the leaves of timothy and other grasses leaving the stems, except pressed to eat these from hunger, but they will abandon them for the weeds even eating the May-weed or "dog fennel" in preference. Of wheat they eat the leaves, seldom attacking the heads and never the stems. But when they attack oats or corn they mow it down as they go close to the ground. Clover they avoid, never eating it unless driven to it by extreme hunger. Their time of eating depends more or less upon their numbers, quantity of food and state of the weather. If the weather is pleasant and not cloudy and the worms not very numerous and food plenty they generally feed at night or early in the morning and late in the evening. If the weather is cloudy and cool they feed throughout the day.— If their number is excessive the sun must be quite warm before it drives them to their hiding places beneath the clods and rubbish.

Having completed their term of existence in the larva state, they abandon their food and crawl rapidly about hither and yonder and finally descend into the earth a short distance, or crawl under clods, rails, etc., where they enter upon the second stage of their lives called the pupa or chrysalis state. The chrysalides or pupa vary in length from something less than half an inch to something over five-eighths, and are of a deep chestnut or mahogany red. To undergo this change they do not enclose themselves in cocoons but simply bury themselves in the ground or hide under some clod or stick, and having thrown off their larvæ skins remain as naked pupæ until the moth hatches out. How long they remain in this state is a question of doubt. Dr. Walsh informs me that he is of opinion their normal habit is to remain in this state until the next spring. I say "normal," for he admits the fact that some do

hatch out during the summer, but supposes these are exceptions to their proper habit, as is the case with other species of the order. Although I at first differed with him and in the *Prairie Farmer* advanced a rather different theory, yet I am somewhat inclined to yield to his view. Reasons: Only a portion of the chrysalides I have caged have hatched out, less than half. If those in the fields had hatched out the "miller" would be abundant, which is not the case. As to this part of their history I am not yet satisfied with any of the theories advanced.

Although Dr. Fitch makes this species *Leucania unipuncta*, thereby separating it some distance from the genus *Agrotis*, yet that the species we have here is closely allied to the **Agrotididae* there can be no doubt. And therefore to throw light on our species I will quote from some entomological writers in regard to the history of some species of this genus or that are closely allied in habits and nature.

Dr. Melsheimer in a letter to Dr. Harris (Inj. Ins. 346) makes the following remarks:

"There are several species of *Agrotis*, the larvæ of which are injurious to culinary plants; but the chief culprit with us is the same as that which is destructive to young maize. The corn cut-worm make their appearance in great numbers at irregular periods, and confine themselves in their devastations to no particular vegetables, all that are succulent being relished by these indiscriminate devourers; but, if their choice is not limited, they prefer maize plants when not more than a few inches above the earth, early sown buckwheat, young pumpkin plants, young beans, cabbage plants, and many other field and garden vegetables. When first disclosed from the eggs they subsist on the various grasses. They descend into the ground on the approach of severe frosts and re-appear in the spring about half grown.— They seek their food in the night or in cloudy weather, and retire before sunrise into the ground, or beneath stones or any substance which can shelter them from the rays of the sun; here they remain coiled up during the day except while devouring the food which they generally drag into their places of concealment. Their transformations to pupæ occurs at different periods, sometimes earlier, sometimes later, according to the forwardness of the season, but usually not much later than the middle of the season."

The words I have italicized show how near the two species agree in habits. We must also recollect that the latitude of Dr. Melsheimer was Dover, Pa. Dr. Harris, in speaking of this same species which he names *Noctua (Agrotis) clandestina* says of the larvæ, "young ones are always more or less distinctly marked above with pale and dark stripes, and are uniformly paler below." The inference to be drawn from these words ac-

cords with what I have before stated, that where favorable circumstances permit them to live their full larvæ life, that near the close of it their color somewhat changes. The habits of the moth of this species also agree with those of our species; "during the day lying hid under the bark of trees, in the chinks of fences, and even under the loose clapboards of buildings." As to the state in which the *Noctua clandestina* passes the winter, notwithstanding the statement of Dr. Melsheimer, Dr. Harris does not appear to be satisfied, but that he "infers" from their "size in May" that this opinion is "generally" correct. One thing is beyond dispute in regard to our species, viz.: that only a part are transformed to moths during the season of their larvæ state. Possibly they may remain in the pupæ state until the favorable season returns and then undergo the transformation, thus causing the appearance of such vast multitudes. On this point we want more data. Let all who know any "facts" in regard thereto publish them; enough may thus be gathered to settle the question beyond dispute.

DESCRIPTION OF THE MOTH OR "MILLER."

Length, a little over three-fourths of an inch; expansion of the wings one inch and three-fourths; fore wings somewhat longer than the hind wings. General color of the fore wings a pale ashy brown with fine dusky points thickly scattered over them; near the front margin just behind the submarginal vein, between it and the next chief vein; about midway between the tip and base are two lighter yellowish circular spots with darker centers; the outer spot, which is at the termination of the inner vein, is the larger of the two. Near the outer point of the wing is another pale triangular spot, the point of the triangle reaching down to the point of the wing, this spot is often indistinct, joining it on the inside is a dusky irregular spot; the posterior and part of the inner, is lined with a heavy fringe of pale lilac color. The posterior wings are about the length of the abdomen; having a pale cream colored anterior basal margin; the disk transparent, smoky; a broad, irregular, dusky band at the tip, broadest before; the posterior or inner margin smoky with a very slight tinge of purple; the veins dusk; on the dusk between the two chief veins opposite the points where they bifurcate is a small oblong dusky spot; the tip or hinder margin is wavy and is lined with a heavy pale silky fringe. The back of the head and thorax are covered with a thick and heavy coating of fawn-colored hair. The thorax, although

having a very heavy coating of hair, is not crested. The under side and tuft at the extremity of a pale fawn color. The eyes a brownish-black, slightly pubescent.

GENERAL CHARACTERISTICS.

The palpi rather short, ascending, hairy, terminal joint short, small, horizontal and naked at extremity. Antennal simple, slightly ciliated; of same specimens appear slightly pectinated (sexual differences unascertained); head small; thorax very hairy but not crested; abdomen tufted at the tip; fore wings entire, not very broad and very slightly deflexed.

To make the foregoing special characteristics more complete I will add the following marks:—

Many individuals, most in fact, have a small white triangular dot on the mid vein of the fore wing at its bifurcation, touching the inner edge of the posterior circular yellow spot before described. In some individuals this dot is very apparent, even at a distance, in others it is indistinct. At the tip of the fore wing is a row of submarginal black points regularly peaced and equi-distant, generally numbering some seven or eight.

The generic characters of the moth I must admit carry this species nearer *Leucania* than any other genus of *Noctuidæ*. But the habits and characters of the larvæ, if allowed to guide us, would certainly place it in Harris' sub-family, *Agrotididæ*. Having no work giving any specific or even generic characters of *L. paleoptera* save what little is to be found in Harris & Westwood, I must yield to the name as given by Dr. Fitch, yet protesting that the habits of the *Leucanians* as heretofore recorded will not embrace our "army worm" but in many respects differ widely from them. As to taking the systematic arrangement of the genera, as a guide to similarity in habits, I admit that in the *Noctuidæ* it is not safe. For we are told by Mr. Westwood that as many as five distinct types of larvæ are embraced in this family. And we also find that the arrangement of Westwood, of the *Weiner Verzeichniss*, of Ochsenheimer, and of Guenee all differ. Yet all these agree in placing the *Non-agridi* and *Leucanidi* in close proximity, and some even include the latter in the former. And the habits of the larva of this group are given thus: "Most of them live within the stems of reeds, flags and other water plants; some in the stems, and even in the roots of plants remote from water." Here I leave this point, unwilling to measure arms with an entomologist of the experience

and as well informed as Dr. Fitch; and especially in regard to a species of Lepidoptera which has never been a favorite order with me.

I will add that one individual entered the pupa state on the 4th day of June, and that on the 20th day of the same month the moth appeared.

REMEDY.

Each farmer should procure a well prepared specimen of the moth and carefully preserve it. Get some entomologist to identify and prepare it. Then watch carefully each spring from the middle of March to the middle of April for their appearance, and whenever they appear as soon as the eggs are hatched (if in a meadow, pasture, etc.) plow under the grass while the worms are small. This will kill the greater portion of them and those that succeed in extricating themselves, and come to the surface, will be too young and weak to travel in search of food, and must die. This ground can then be used the same season for some other crop. Burning over the grass with straw, etc., about the time the eggs begin to hatch, it is said will answer the same purpose, but I should prefer the other plan.—When they begin to travel the only adequate remedy, so far as ascertained, is ditching against them. Let the ditch, if possible, be outside of the field you wish to save. Let the side of the ditch, next the field to be protected, be perpendicular, or if it even leans over a little it will not hurt; it should be at least six inches deep, from eight to ten will be better. The bottom should be eight or ten inches wide; and along it, at every twelve or fifteen feet (distance varying according to the number of worms), square holes as the bottom of the ditch and near a foot deep should be dug. If the worms are so exceedingly numerous as to fill up the holes and ditch rapidly, straw, leaves or shavings scattered over them and fired will kill them; and then they can be thrown out with a spade or shovel. By digging the ditch outside the field you have a chance, if it should fail from any cause to keep back the worms, to dig another and better one on the inside, without advancing into the field to the injury of the crop. When they appear in a meadow or grass pasture in but moderate numbers it may be saved by turning in hogs which greedily devour them, and they do the hogs no injury.—And I may add here that the idea entertained by many that chickens that eat them are thereby rendered unwholesome, is an error, they do the chickens no injury, so far as wholesomeness is concerned. The idea suggested by the editor, to

drag a rope across wheat, thus causing the worms to drop, is probably a very good one. But I am inclined to the opinion the worms, although they will climb up no more that day, will be apt to be found on it the next. Yet I may be wrong in this, and if not, a few days sweeping would in all probability drive them off, and if it done no injury to the heads would certainly prove beneficial to the crop. I find that after the wheat has been threshed out, where the worms were numerous, and stripped the blades pretty clean, the effect of their attack becomes apparent in the diminutive yield. And this is more evident where the soil was not strong and deep; many fields that should have produced fifteen bushels, yielding only six, eight or ten, or even less.

Heretofore, in more than one instance, when the "Army worm" appeared, the Rice Bunting (*Dolichonyx oryzivora*) also made its appearance in considerable numbers, and assisted greatly in destroying the worms. This was the case the last time the worm appeared here—some five or six years ago—but this season I have seen none about. The worms are attacked by some parasites belonging to the order *Hymenoptera*, and family *Ichneumonidae*. I have some specimens in the pupæ state, they are enc'osed in a cocoon-shaped pupa case divided into rings, are about one-fourth of an inch long and half as broad, very dark walnut color. I will also add—in answer to an inquiry made by Dr. Walsh—that some of the larvæ (of the army worms) have on some of the anterior segments, glassy eye-like slightly elevated tuberculous spots, one on each side; seldom are more than one segment on the same individual, saw them on two in one case only.

I must close this loosely written article with an apology to you, Mr. Editor, and the readers of the ILLINOIS FARMER. I commenced my investigations as soon as the worms appeared, intending to make them as thorough as possible, but about the latter part of June I was taken down with a severe attack of sickness, and have been able to make no further observations. Yet I deemed it a duty to lay before our farmers what I have ascertained, although it is far from being so complete as I desired.

C. THOMAS.

The above is probably the most complete description of the "Army worm" yet published. Mr. Thomas has laid both science and the farmers under obligation to him for his labors in this regard, and that too when laboring under a severe attack of fever. Elaborate drawings of this

worm in all its stages have been prepared by Dr. Walsh, of Rock Island, for the "Transactions of the State Agricultural Society," and which the Doctor has kindly consented to allow us to use in a future number. They are now in the hands of the State Printer, who is at work on the Transactions. Since writing our article in the July number we find that the worm has traveled beyond the limits then assigned him, as will be seen by the above. We had supposed that the chrysalids all hatched within a short time of maturity. We have dug up a large number, all of which had hatched out the moth. We have seen the miller in large numbers here the last of June. It is possible that a part only of those placed in boxes in a dry room might not have hatched, while those in the field all hatched. Enough is now known of this destructive insect, to be prepared to arrest his progress in a great measure. As he has become identified for the first time in nearly all his changes, he will be recognized on his first appearance and a successful war waged against him. We had supposed that they always appeared first in the meadow or grass lands, but it appears they do not, as several persons have assured us that they first appeared in wheat and rye fields distant from the meadows, but the meadows are certainly the favorite places. They avoid the prairie grass as well as clover.

Under the head "Remedy," we would call the especial attention of our farmer boys to the value of preserving specimens of insects for future use and identification of them at a future time. In the insect family there are so many that are so nearly alike, that without a proper specimen it is impossible with persons not experts, to identify them correctly. At the State Fair will be exhibited numerous cases of prepared insects, and we hope our young readers will take a sharp look at them so as to enable them to get up their own specimens.

Ed.

[For the Illinois Farmer.]

Talks at the State Fair.

At the two last State Fairs there has been an evening meeting, purporting to be made up of farmers, and gathered together for the ostensible purpose of talking farmers' talk; of enlightening each other on matters pertaining to the farmer. Now I have a question to ask: what real benefit results from these meetings? The gates are all shut and no one admitted except on especial occasions after dark. The farmers have mostly gone home, and we are to have a practical

meeting of practical farmers, made up of horse jockeys, cattle dealers and their men, implement exhibitors and a class of editors, reporters, nurserymen and fruit exhibitors. We have paid very close attention to the discussions, having attended nearly every meeting, and yet have failed to hear anything that I did not before know, but on the contrary have heard the same experience re-told and rehashed, time and again, by the same persons. I have noticed the same speakers on hand, and if a new man comes with any new idea that clashes with their theories, they pitch into him and he is completely used up instantaneously. Wheat growing, wool growing, fruit growing and draining have all been discussed until they have all run dry, and now I should like to hear some new questions talked about, or the old ones dropped. We all know how to sow wheat, we know that dogs will kill sheep, we know that some trees will bear fruit, and that others will not, which fact may be ascertained by leaving the selection of your trees to the nurseryman; and we know that the farm and garden are benefited by draining, and we know that the drains have got to run down hill, or they won't work; now as everybody knows this what is the use of riding it any longer.

H.

—There is some show of truth in the above, so far as it regards the audience, and yet a large amount of information has been gleaned at these meetings. The meetings should not be held on the Fair grounds, but in some convenient place in the city, ample notice of the time, and place, and subject to be discussed should be given. Our correspondent is in error when he asserts that everybody knows how to grow wheat, wool and trees to the best advantage, for these subjects are far from being exhausted, and we know of no other subjects of more interest to the farmer than these. The wheat crop has become one of vast importance to the State, as its culture is better and better understood; while the long lustrous wools are taking the place of the fine silky ones, we may consider the propriety of the change.— Orchard culture is yet in its infancy, and not until a uniform practice obtains is it time to cease the discussion of the subject. That there are other subjects of as much importance that might profitably occupy the time of the meeting we have no doubt.

Ed.

—There are a great many subjects to be wise and witty upon—and just as many to be ignorant and foolish about.

[For the Illinois Farmer.]

A Valuable Chapter from Prof. J. B. Turner.

ED. FARMER: *Dear Sir:* I fear that you may have made the same discovery that I have in regard to our Illinois Cultivator. I bought one of the manufacturer, for which I paid him the full price last spring, as other purchasers do; I did not particularly examine the detail of the work, but after using it a time I found that the manufacturer, for the sake of saving twenty-five cents on the drums—which Mr. Eno got made by contract—had so made them that they were good for nothing—wood screws, instead of bolts, in the flanges, contrary to my express order; and poor sappy lumber half bound and put together, instead of a good firm drum. Now I am mortified to think that all those drums are probably of the same sort, and if so, good for nothing at all. At the time they were brought to Mr. Eno's shop and painted and put into the frames I was using, and did not examine the drums till they were shipped off, or I would have had them all changed. There are other weak points in my machine, also, I find, which it would have cost no more to have made right than to have done as it is.

I shall allow no more machines to be made in this way, you may rely upon that. I will put every manufacturer under contract to do them as ordered, or not at all. But as I have never asked a cent's profit on the machines as yet, in any way, and even paid for my own without any deduction of patent fee, while I am out of pocket in the experiment, I doubt not thousands of dollars in time and money, I thought I could learn those interested in the *whole profits* to look after the details of the work; but I find I cannot; they get too many fingers in the pie, that do not feel a personal responsibility.

All the reports of the working of the machine, *without exception*, are of the most favorable kind so far. Hired men, and even lame men, who can not walk, have tended, as they report, from sixty to seventy acres of corn with them in the best style, and have had time to spare for other work, with only one span of horses each for any part but the breaking of the ground. I thank you for your kindly notice of it, and if you have discovered the same great defects in the manufacture that I have I hope you will be as lenient toward it as is consistent on the assurance that it shall not occur again if I live and am well. No one meant wrong, I presume; but it is a new thing, and they did not consider how much

strength such constant racking would require at certain points; but for putting those wood screws in the flanges they were inexcusable, for I had tried them the year before and told them expressly they would not do.

COAL OIL AND TURPENTINE FOR INSECTS.

Your paper has spoken frequently of remedies for vermin of varied sorts on animals and trees. Now I know of nothing so effectual for all that sort of thing as *coal oil* and *spirits turpentine* and *coal tar*, wherever they can be applied, for they are all *instant death to all forms of insect life*.—Coal oil can go safely upon all animals, cattle, horses, sheep, etc., in moderate quantities, and will kill all imaginable forms of lice, tick, animalculæ, etc., and cure many, if not most forms of diseases of the skin, particularly all forms of itch, human and animal more surely and at far less risk and cost than anything else. I have ordered it repeatedly and never failed to cure immediately the worst forms of "Illinois mange," as it is called, and other similar diseases, on those who have had it. The only thing needed is to apply it moderately to all parts effected. Same of cattle, horses, sheep, etc. Also, if you have ants or other troublesome insects in the cracks of the house, or barn, or in a defective tree where you do not want them; a little poured into their retreats will drive them away at once.

On the bark of trees it seems not to injure the apple, in small quantities, or the pear, but it does the peach. I therefore prefer the spirits turpentine for all forms of vermin on the bark of trees, which I have used with success for years.

COAL TAR,

Also, which is equally destructive to all insect life. But it is not good on animals or about premises like the other, and is dangerous if not used with care on the bark of trees, of all sorts; but a little can be poured into the hole of a borer of the apple or peach, with a small spoon or better a small oil can, with much more ease and effect than he can be dug out. But tobacco moistened and stuffed into the hole will answer the same purpose, only it takes longer to do it.

I attack all insects on animals, then, with coal oil; all on the bark of trees with spirits turpentine or weak lie, or strong soap; all in trees or in other hidden places, with whichever is at hand and most convenient, and they soon make themselves scarce.

It is also true, that if a small cup of salt or a small bar of soap is laid in the crotches of trees,

so as to run down by the rains over the body, it will keep the eggs of the borer and many other insects from hatching, or at least from maturing; but it will not of course kill those already lodged in the tree. These must be taken out by the other processes.

I am fully satisfied also that large droves of ducks, turkies, geese and hens, and flocks of birds around a nursery or an orchard through the early spring and fall months, do immense good, in devouring insects of all sorts, and where there is many fruit trees they more than pay for their keeping in this way alone. And I think it might be well to try the effect of coal oil moderately on the worm that causes the gaps in the windpipes of young chickens, but I never have done it.

I still continue every year, without fail, to save my cucumbers and melon vines from the striped bug, however abundant, by a small box put round the hill six inches high and ten inches square, with its upper edge covered with fresh coal tar—though I see that some one or two others have failed in this, probably from some defect in the process.

That hideous blight which I described some ten years ago in the *Horticulturalist*, has re-appeared in the *pear leaves*. The center of each leaf turns black in spots and rots and falls out.

The grapes also have rotted some. Fruit, corn and crops of all sorts, with very few exceptions, are fine. The weather is so warm that I hardly think Parson Brownlow will fight the Sepoy rebels on his chosen field of ice this month; for I presume hell is not likely to freeze over so long as the thermometer is about one hundred degrees in the shade, on earth.

I suppose I ought to apologize to you for obtruding this loathsome subject of insects and their remedies, for doubtless you know more about it than I do, but these tiny creatures in their multitudinous and microscopic, as well as larger forms, so annoy the comfort, destroy the health, and the works of man, that I feel that we must all keep after them, and do what we can for their destruction; and while our learned and indefatigable friends in our natural history society have been after them with their sharp and well trained eyes, to give them a name in the world, I have been trying to do a little also, as I could, to find the best means to push them out of it, and the several articles named above are the most extensive I have ever found, out of a great multitude of things tried.

Yours truly,

J. B. TURNER.

P. S.—Since writing you the foregoing, your remarks in regard to the "Cultivator," in the August number are at hand. You are substantially, though I think not wholly correct in your remarks and strictures on the machine. It costs too much I know, and had already concluded to reduce it at least one-third. You and others do not want the knives, while others do, especially in drilled corn, when the land is in good order; so of the steering apparatus. But your idea of simplicity and cheapness and the use of iron drums are excellent, and shall be acted upon.—I shall retain the patented principles and cheapen and simplify my machine, make it strong, firm and durable, as you suggest, before another spring. I know that you will do me full justice in the premises, and that next spring I shall meet your full approbation as well as the thousands of farmers who are sending in their orders for the cultivator.

J. B. T.

Jacksonville, Aug., 1861.

REMARKS.—Our readers will bear in mind that Prof. Turner is the inventor of "Turner's Cultivator," or what we have denominated the "Illinois Cultivator," from the fact that it is the king of cultivators. But Mr. T. did not manufacture them; this was done by another party who got them up at different shops as best he could, and the result is they were so poorly made they would scarcely stand a year's work, and hence our remarks in the last number in regard to them. We care not who sends out a half made farm implement, or under what pretext, we intend to make it our duty to expose the cheat. Our farmers have been imposed upon with brittle, sappy ash painted over, with rotten iron, with green timber and bad workmanship enough to now have a stop put to it, and nothing shall prevent us from exposing these deceptions hereafter. Why has Brown's corn planter become so popular? not that its principles are better than a dozen others, but that it is honestly made. So of the Manny reaper of Emerson & Co., of Rockford, so of the shellers and field rollers of Attwater of Morris, while the superior material and workmanship of the horse powers and threshers of Wheeler, Mellick & Co. of Albany, N. Y. have attained a national form.

It is therefore useless for any new inventor to attempt to foist on the public any of these gingerbread got up gimcracks. The farmers ask and will have good and durable implements. We have long known Prof. Turner, and have learned to value him as a public benefactor, and it is only

characteristic of the man that he should be as much disappointed in the sending out of his pet bantling in such a sad plight; as we are, and as he assures us, that hereafter all will be right, we shall rest satisfied. Mr. Eno, the maker, we consider a very estimable man, but this is a new business to him, and of course he could be easily imposed upon. He has been a large loser in consequence, and as he has been taught wisdom through his pocket it will be a good investment for all interested. As badly as this cultivator was made, its work has given good satisfaction, as compared with the old tools, and for some kinds of work we deem it almost impassible, and when it shall be simplified and made durable it will become, in the culture of hard crops, what the steel clipper is to the small grains. As suggested, a cheap form of this machine can be made for those who prefer to walk, but we do not think they will become popular. It is tiresome work to follow, day after day, the shovel plow, and for boys it is particularly injurious to the system, and should be abandoned the first opportunity. We do not think it will be found profitable to make this cultivator with a view to lay by the corn, as a good horse hoe cultivator will do it equally well and as rapidly, and leave the ground level and in fine order.

Coal oil, coal tar, turpentine and poultry for the garden, the orchard and insects in general. We can fully endorse the views of Prof. T. in the above, and hope our readers will profit thereby. That awful blight is making sad havoc with the pear trees along the Mississippi border, and we fear it will spread over the State. It differs from the leaf blight, which is a species of cholera coming from the east and traveling west, but fire blight attacks the trunks as if by a sun stroke, and it suddenly dies in whole or in part. Of this we shall speak more at length in another place.

ED.

My Garden.

ED. FARMER—*Dear Sir:* At your request, and according to promise, I herewith send you the number and kinds of trees that I have on my lot of 160 feet square, almost every one of which is in bearing this season. I have 70 dwarf and 14 standard pear trees, 13 plums, 13 peaches, 2 apricots, 13 cherries, 18 apples, 2 quinces, and 1 hard-shell almond. In addition to the above list of trees I have some ten varieties of grapes, the Isabella, Catawba, Concord, and White Muscadine, all bearing.

The Isabella have been very much affected by the rot, which came on about twelve days since and thinned them out very much. I thought that it was caused by the work of a small, light colored bug that perforated the leaves with a great many small holes. I applied whale oil soap, one pound to four and a half gallons of water, with a garden syringe, on the foliage at night, and drove the bugs off, and the rot ceased for a while; it commenced a second time, and I applied the soap and it has stopped them again. My pears are most of them very heavily laden and the fruit is most beautiful.

We are having a very warm and dry spell, not having had any rain for over three weeks, and unless we get some within forty-eight hours the corn crop will in these parts be very poor indeed, and in fact all crops will be much injured unless rain comes soon, as everything is burning up.

Yours truly,

C. A. MONTROSS.

Centralia, Aug. 1, 1861.

REMARKS.—We have before stated that the garden of Mr. M. was the best arranged and most profitable in the State, and for this reason we wish to present it to not only our railroad employees, to the merchant and the mechanic, but to the farmer, to show what can be done with a judicious outlay of money and labor. Mr. M. is well known to the traveling public as one of the conductors on the I. C. R. R., and for the past year his health has been such that he has been able to do but little with his own hands, yet he has by a judicious outlay of labor kept his little Eden in order. The garden is well underdrained and thoroughly enriched with common barn yard manure. The grapes are in part on an arbor, and the remainder against the north and west side of the enclosure, which is a light board fence seven feet high. Along part of the north fence is a good supply of the Black Cap raspberry. There is an abundant supply of currants under the standard pears and the dwarf apple trees, which produce as well as any that we have seen at the north, proving most conclusively what we have often asserted that this valuable fruit can be grown abundantly in all parts of the State by using a proper amount of shade and underdraining. The trees are all trained low, and with the exception of the cherries, in a most healthy and luxuriant condition. The cherries are being replanted with the Early May cherry and other fruits, as they one by one give up the unequal contest with the wide variations

of temperature. Vegetables and vines of all kinds find a place among the trees and along the borders, but as the trees become larger and cast a dense shade, these will become less and less productive. The dwarf apples have thus far given the poorest return; they occupy a large space and show little inclination to fruit. This we have found to be the case on all prairie soils, while on the timber lands they do much better. A few early bearing, upright growing sorts treated as dwarfs are certainly more profitable in such yards on the prairie soils. We shall expect to see a large number of similar gardens not only in Centralia but in other villages along this road. In fact fruit growing about Centralia has already become a leading feature, and some of the best orchards in the State are within two miles of the station. ED.

Crops in Central Indiana.

ED. FARMER.—Seeing no correspondence in regard to crops from this section, I send you a few observations for the benefit of your readers.

WINTER WHEAT.

Of this crop an uncommon breadth was sown last fall. Much of it was hurried in on the "dive and scoop" principle, unclean seed, shallow plowing, and all the other ills which belong to the cut and cover system being used putting it in. In the spring many of our wheat growers found themselves chess growers, and could account for the unexpected crop in no other way than *transmutation*. Leaving this question for the old fogies, we find many fields were badly winter-killed, while others were as badly chessed, some of it so much so that it was left uncut. We have made inquiries of those engaged in threshing, who estimate the yield as far below the average per acre. Most of this loss belongs to and will, of course, fall on those who still use the old pioneer system of putting in seed, while those who drilled in their seed make very little complaint about the crop.

CORN.

There is much less planted than usual, and will not yield as much per acre as last year. This is attributed to short tillage and a dry season, making short ears. How the benefit of the late fine showers may effect these estimates we cannot say as yet. We think the crop will come nearer to an average than many of our farmers now admit.

OATS AND HAY

Are both good, in quality and yield, and have been put in barn and stack in good condition.

There are but few Oats raised in this part of the State, Corn being used almost entirely for feed.

FRUIT.

Here we notice a large falling off from the usual average—say, nearly half below. Most of the summer apples were cut off by the frost of May 2d, so that we find but few in market. Late varieties did not suffer quite as bad, but will fall far short. Peaches are few, mostly seedlings at that; so we are compelled, if we want anything else, to seek them abroad at high prices. There is considerable interest taken in purchasing good varieties of the apple tree, but with most of our farmers a peach is nothing more nor less than a peach. Many of them, seemingly, are unaware of the many excellent varieties to be had nearly as cheap as the seedling.

If more good agricultural papers could find a place at the firesides of our farmers in this part of our fertile State, we think much greater progress would be made, and many comforts be added to the farm-house, of which their dreams have not yet dared to unfold.

Attica, Ind., Aug 17, 1861. W. DUNLAP.

President's Whitewash.

A correspondent of the *Rural New Yorker* gives a recipe for what he is pleased to call the President's whitewash:

Take a half bushel of nice unslaked lime; slack it with boiling water, covering it during the process to keep in the steam. Strain the liquor through a small sieve or strainer, and add to it a peck of clean salt—previously well dissolved in warm water—three pounds of ground rice mixed to a thin paste and stirred in boiling hot; half a pound of powdered Spanish whiting, and one pound of clean glue, which has been previously dissolved by first soaking it well, and then hanging it over a slow fire in a small kettle within a larger one filled with water. Add five gallons of hot water to the whole mixture, stir it well and let it stand a few days, covered from the dust. It should be put on quite hot; for this purpose it can be kept in a kettle on a portable furnace. It is said that about one pint of this mixture will cover a square yard upon the outside of a house if properly applied. Brushes more or less fine may be used, according to the neatness of the job. It retains its brilliancy for many years. Coloring matter may be used.—Spanish brown stirred in, will make a red or pink, more or less deep, according to the quantity. Lampblack in moderate quantities makes a slate color, very suitable for the outside of buildings. Yellow ochre, stirred in, makes a yellow wash; but chrome goes further, and makes a better color. Green must not be mixed with the lime, the lime destroys the color, and makes the whitewash crack and peel off. Where the walls are badly smoked, and you wish to have a clear white, it is well to squeeze in indigo and stir into the whole mixture.

THE ILLINOIS FARMER.

BAILHACHE & BAKER.....PUBLISHERS.

M. L. DUNLAP, EDITOR.

SPRINGFIELD, SEPTEMBER 1861.

Editor's Table.

The ripening breath of September is breathing out its blessed and cooling zephyrs. The heats of summer are past; the harvest moon rides the midnight sky with a subdued look, as much as to say, I am just looking on to see Pomona paint up the the fruits that ardent summer has thrown into the lap of autumn, and some night 'ere long I will jewel up the landscape when the frost king first kisses the deep verdure of summer. The season has been bountiful and the germing will soon be over, and were it not for the trumpet's voice that remind us of vast armies preparing for deadly strife, we should have great cause for rejoicing over a prosperous season; but, alas! the dogs of war are loose, the temple of Janus is opened and the battle fields will be the great harvest where death shall garner up the sons of toil, and a wailing cry shall go through the land.—Would that the crop could be spared us, but the heats of August have only retarded, not thrown its poison away.

MUNIFICENT DONATION.—It was announced at the late meeting of the Alumni of Yale College, that the scientific department of that institution had received during the collegiate year a second donation of \$50,000 from Joseph E. Sheffield, Esq., of New Haven. The course of education in this department is essentially that of the polytechnic schools of Europe, and is designed to fit young men for commercial and other practical pursuits, as well as for the direct applications of science.

VERMILLION COUNTY FAIR is to be held at Catlin, 12th to 15th October. We have no doubt that as usual, a fine show will be had in this county; the officers are full of enterprise, and know how to get up a good Fair. They challenge the world to compete for their \$1,056 in premiums.

Invited Guests.—All the members of the Press throughout the Union, are respectfully invited to attend our Tenth Annual Fair, and will receive their tickets upon reporting themselves to the Secretary.

At most of our County Fairs the press have been overlooked, and in some cases that have come under our notice they have been permitted to pay their own gate fees; in fact, this we have done on several occasions ourself. At one Fair in particular, two editors of prominent Western agricultural journals, and one from a prominent city paper were present, and though they met several of the officers, some of whom they were acquainted with personally, yet they received no especial courtesies at their hands, and these same officers appeared disappointed when no notice of the Fair was taken in these respective papers.—From what we know, and judging from our country exchanges we think it time that a change was had in this direction. A County Fair is to some extent local in its character, and for this reason the local press should make a full report of it, adding such suggestions as the occasion would seem to call forth. But few editors care to pay a dollar to admit themselves and families, make a full report of its doings, without the least assistance of its officers, give up their columns to the list of awards and do all the advertising gratis; yet such appears to be the expectation of a majority of the managers. This is what we call snubbing the press, and we shall take no offence if the society is snubbed in return by saying not a word about it. The officers of Vermillion can see through a grindstone when the handle is out, and we shall calculate upon a certainty that the county papers will do them ample justice. From several premium lists before us we see similar indications of good policy.

ILLINOIS TEACHER, for July, is on our table, published by N. C. Nason, Peoria, at one dollar. For some time it has been without a responsible editor, but we hope to see it again flourish. It should be in every school in the State.

THE HORTICULTURIST, for August is at hand, and as usual filled with valuable advice; \$2, C. M. Saxton, New York.

WHEAT "MIDGE," on page 239, and again on page 242 it is *printed* "Wheat *Mulgo*." Our readers will please correct.

"HUMBUGS.—'Dear Sir: I shall esteem it a very great favor if you can give Thorley's Food a lift by inserting the above as a news paragraph, free.

I am, dear sir, yours truly,
JOSEPH THORLEY.'

Undoubtedly! But then there are two substantial reasons why we can't do it: First, because we believe 'Thorley's food' to be an *unmitigated humbug*; and secondly, because we do not intend that the Wisconsin *Farmer* shall be the organ of any set of patent right venders in the world. We frequently receive urgent petitions from nostrum-mongers and all sorts of quacks and public nuisances, for the publication of their stereotyped lies, together with large offers of pay, if we will only 'give them a lift.'—The advertisement and the pay are always refused; but the *lift*—over the left shoulder—they may calculate on every time."

We will back you on that, every time—hit 'em again.

FALL SOWING OF BEETS.—In the garden of A. S. Sherman, of Waukegan, we saw a fine growth of beets which had been sown last fall, and Mr. S. says they do much better, are some days in advance of the spring sown and he recommends that season for sowing.

SEPARATING CHAFF FROM WHEAT.—Much of the chaff can be separated by a good fanning mill.—A very effectual way to get rid of these and other foul seeds is to cover the grain just before sowing, with strong brine, which will float the weed seeds, while the wheat sinks. The worthless stuff can then be skimmed off and burned,—*Am. Agriculturist*.

COLUMBUS NURSERY.—We take pleasure in calling attention to the card of this nursery, to be found in its proper place.

This nursery is in the hands of Western men, who are fully posted in the wants of the West. It has been growing in popular favor from year to year, as it increased its capacity for usefulness, and now it is one of the most extensive. Its owners have built up a name for integrity and fair dealing that will insure them a continued prosperous business. Their stock of pears, both dwarf and standard, is said to be unusually large, select and well grown. All those who send out of the State for trees would do well to consult

the catalogue of our Ohio neighbors. The distance is but short, and packages go through in a few hours, instead of days and weeks, as is often the case in sending further East.

THE STATE FAIR.—No one should forget the State Fair. It is not probable that such another opportunity to see the various weapons of war will soon be repeated as at this Fair. At any other time and under other circumstances we would consider this feature out of place, but now it is just in time, for while we are compelled to make use of this kind of enginery, yet we should learn to lay aside its barbarism as soon as the occasion will admit, and return to the arts of peace. From what we can learn the coming Fair is to be one of the best. Corn growers will be particularly interested in the great variety of two horse cultivators that will be exhibited. Complain as you may of the want of money, no farmer can afford to stay away if it is possible to get there. We have never seen an intelligent farmer attend the State Fair but that it proved a good investment.

MACON Co. FAIR.—Will be held at Decatur Sept. 17th to 20th. The list is an attractive one, and from the well known ability of the officers we may expect to hear a good result.

"Premiums—How and when paid.—The money received at the gates and for permits for restaurants, and all fines that may be collected, and all other profits arising from holding the Fair, after paying the expenses of the Fair, and ten per cent. interest on money invested by stockholders in the Fair grounds, and the fixtures (the money to be applied by the building committee in improving the grounds), shall be distributed *pro rata*, as published in the premium list. The premiums will be announced in the evening of the last day of the Fair, at the stand, and paid in money, plate, agricultural implements, or agricultural books or papers, at the option of the exhibitor.

Invited Guests.—The editors of agricultural, horticultural and mechanical papers; and all other editors, in the State of Illinois, by giving notice, or otherwise calling attention to the time of holding the Fair, etc.; the presidents of agricultural, horticultural and mechanical associations in Illinois; and all the officers of the Illinois State agricultural society, are especially invited to attend. Editors are requested to call on the secretary, who will see that the others will be furnished with tickets of admission. All others will be furnished with tickets by applying at the treasurer's office at the gate."

CHICAGO DAILY STAR.—Yesterday we received No. 1 of this new candidate for public favor. It is an evening paper, and as such will doubtless prove very acceptable. The low price at which it will be sent on—four dollars per annum—will make it valuable to a large class who do not feel able to take a seven or eight dollar daily, and yet do not want to wait the slow progress of the weeklies. We have known Mr. C. C. Flint, the editor, for a number of years, both before and during his connection with the *Daily Democrat*, and can vouch for his fidelity in market reports, and as a correct and reliable reporter. His agricultural selections and notices have always evinced good taste.

BROWN'S CORN PLANTER PATENT.—

“United States Circuit Court, Hon. Thos. Drummond presiding.—The Corn Planter Patent Right Case.”

Jarvis Case versus George W. Brown.

This was an action on the case for an infringement of a patent. The material points in issue were as follows: In 1853 Case invented a combination of a lever slides and valves, to be used in a seed planter, designed chiefly for planting corn. He obtained a patent for his invention in January, 1855, and a re issue thereon in November, 1858. The defendant, Brown, resides at Galesburg, in this State, and has been for some time largely engaged in the manufacture of agricultural implements, among which is a sower or corn planter, in which the plaintiff alleged that he used his invention. The action was brought to recover damages for the alleged infringement. The defendant relied on several grounds of defense. The identity of the two machines, as mechanical equivalents, was not much contested. The principal reliance was that Case's patent was void for want of novelty in the invention. The defendant sought to show that he had himself used the invention as early as 1851 or 1852; also that A. B. Earle of the State of New York had used the same combination in a machine, in 1848, and that one Charles Finn had used it as early as 1852. The precocity of Earle's and Finn's machines was admitted by the plaintiff, but he insisted that they were different from that used by himself and Brown, and he denies that Brown had made or used the invention prior to himself alleged. The defendant also insisted that upon Case's construction of his own patent, he did not infringe; in other words, that his combination was different. A very large amount of testimony was adduced on both sides. The trial was commenced on Saturday, the 3d ult., and the case was given to the jury. They came into court, failed to agree upon a verdict, and were discharged. Peaslee, Osborn & Felton, and Gookins, Thomas & Roberts, for plaintiff; L. Douglas, Goodwin, Larned and Goodwin, for defendant.

It is to be regretted that this suit could not have been decided at once. We think the case a

plain one, and nothing but the mystification of lawyers could have prevented it. The system of selecting juries is a bad one, and the courts should interpose their authority to put a stop to it. An attorney who has a bad case will always set aside every intelligent jurymen presented—the more fool the better luck, appears to be their motto.

STATE FAIRS.

Illinois—Chicago, Sept. 9 to 14.
Iowa—Iowa City, Sept. 24 to 27.
Wisconsin—Madison, Sept. 23 to 27.
Michigan—Detroit, Sept. 24 to 27.
Ohio—Dayton, Sept. 10 to 13.
Kentucky—Louisville, Sept. 17 to 21.
New York—Watertown, Sept. 17 to 20.
Milwaukie Agricultural and Mechanical Association, Sept. 2 to 6.
California—Sacramento, Sept. 16 to 21.
Canada West—London, Sept. 2 to 27.
Minnesota—St. Paul, Sept. 24 to 27.
Oregon—Oregon City, Oct. 1 to 4.
National Horse Show—Ottawa, Ill., Sept. 3 to 6.

ILLINOIS COUNTY FAIRS.

Knox—Knoxville, Oct. 1 to 4.
Bureau—Princeton, Sept. 24 to 27.
LaSalle—Ottawa, Sept. 24 to 27.
Mercer—Millersburg, Sept. 24 to 26.
Morgan—Jacksonville, Sept. 3 to 6.
Henry—Cambridge, Sept. 4 to 6.
Logan—Lincoln, Sept. 25 to 27.
DuPage—Wheaton, Sept. 25 to 27.
Pike—Pittsfield, Sept. 25 to 28.
Madison—Edwardsville Oct. 1 to 4.
Grundy—Morris, Oct. 1 to 4.
Winnebago—Rockford, Sept. 17 to 20.
Union—Warren, Sept. 17 to 20.
McLean—Bloomington, Sept. 24 to 28.
Cass—Virginia, Aug. 27 to 29.
Lee—Amboy, Oct. 8 to 11.
Warren—Monmouth, Sept. 4 to 6.
Putnam—Hennepin, Oct. 1 to 4.
Monroe—Waterloo, Oct. 15 to 17.
Ogle—Oregon, Sept. 24 to 26.
Peoria—Peoria, Sept. 3 to 6.
DeKalb—Sycamore, Sept. 18 to 20.
Stephenson—Freeport, Sept. 23 to 25.
Vermillion—Catlin, Oct. 1 to 5.
Macon—Decatur, Sept. 16 to 20.
Sangamon—Springfield, Oct. 1 and 2.
Montgomery—Hillsboro, Sept. 24 to 27.
Whiteside—Morrison, Sept. 24 to 27.
Jefferson—Mt. Vernon, Sept. 25 to 27.
Kane—Geneva, Sept. 25 to 27.
Fulton—Canton, —.
Champaign—Urbana, Sept. 20 to 24.
Schuyler—Rushville, Oct. 2 to —.

THE GRUB.—This worm is doing great damage to the corn crop and meadows in the northern part of this State. We have seen acres where the grass was perfectly dead and you could lift up the soil like a quilt on a bed, the grub having completely cut the roots of the grass and loosened the soil. When turned over you will find from ten to twenty to a square foot. This is one of the sacred beetles of the ancients, *scarabeus sacer*, and one of the many large kinds of dung chafers that inhabit our country; an insect whose "drowsy hum" falls so often on our ear during the stillness of an autumnal twilight—which digs a cylindrical hole in the earth, often of considerable depth, and conveys a small quantity of dung to the bottom, in which she deposits her eggs. This was one of the creeping things to which the Egyptians paid divine honors, and appears to have constituted one of the favorite duties of that remarkable people. It was consecrated to the sun; was sculptured on their rings, bracelets and other ornaments, and even enclosed with the embalmed dead, as typical of the sun which is the foundation of light and heat, and the source of all abundance. It came likewise to be regarded as the emblem of fertility, and we are told by Dr. Clark that it is eaten by the Egyptian women, even at the present day, under the idea that it is efficacious for this purpose.

This grub remains in its present state two years before it arrives at maturity and comes forth a perfect insect. When first making its appearance it is of a light brown color, as it advances in age it assumes a darker appearance. Last season these beetles were very numerous; the present crop of larvae is the result; we may expect a cloud of the perfect insect next season. Do not think, however, the farmers will hold them very sacred or wish to venerate so mean an insect as the "tumble bug."—*Farmer's Ad.*

The above we think is a little mixed, but we will not attempt to decide, but suppose the grub alluded to is the May beetle, *Phyllophaga haza quercina*, samples of which abound in manure heaps during the summer. In the grounds of Robert Douglass, at Waukegan, they had been very destructive to the pear seedlings. They could be directly traced to the manure, as they were only found on that part of the seed beds manured.—The young grubs are now a quarter of an inch long; we are inclined to think they come to maturity the third season. The "tumble bug," or dung beetle is of the same family, but we did not suspect him of being mischievous. The truth is we need a State Entomologist, whose business it should be to post our farmers up in a better personal acquaintance with the insects destructive to vegetation. From pages 269 to 263 is an article from Mr. Thomas, who gives a valuable hint in regard to prepared specimens of insects, to enable us to distinguish individuals. If one-third of

the money thus far thrown away on the State Geological survey had been paid such men as Mr. Thomas and Dr. Walsh, we should have been spared thousands of dollars by the army worm, the chinch bug and the Hessian fly. We are sick and tired of seeing do-nothing farmers elected to the Legislature. All such men as completely ignore the interest of their calling, as though they had never seen a farm. It is to be hoped that in the Constitutional Convention provision will be made for the publication of the geological survey reports and the creation of an entomological department in connection with the museum of the State agricultural society. At least we want some one who will furnish at a cheap rate prepared specimens of insects to enable any person to make accurate comparisons. But few persons know the names of insects, much less their habits, and even with drawings and descriptions they will often prove at fault. Works on insects are also exceedingly rare, and can be found only at long intervals; for these and other reasons we shall urge upon the State to fill up the void in this department, and thus materially benefit the farmer. While the State is paying five or six thousand dollars a year to investigate the history of insects turned to stone, it would be far more profitable to investigate those now living and feeding upon the products of our toil.

SORREL AND OTHER WEEDS.—The following excellent hints in a nut-shell, we find in the Massachusetts *Plowman*, which has always set the example of using no more words than necessary in saying what it has to say.—*Wis. Farmer.*

"Many of our papers are giving directions for killing sorrel. It seems to be "a lion in the way" with some farmers, and we have heard the assertion that it cannot be killed short of pulling up by hand and being laid on a dry rock.

But where the soil is free of rocks there is no danger of its prevailing to any extent. A good plow, well held, will bury it deep enough to prevent its appearance through the summer, provided that some valuable plant is encouraged to take its place. Every decent soil will bear something in the course of the summer, and when the farmer neglects to improve his land he must expect to find it green with some kind of vegetable. A good growth of clover will bury all the sorrel and smother it for the whole season. A growth of buckwheat will smother all other vegetation, and come near killing all foul weeds."

—A correspondent wants to know whether, considering the great utility of the ocean, poets are not wrong in calling it a "waste of water?"

Orchard Table,

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TO AN ACRE—FROM FOUR TO FORTY-THREE FEET
APART.

Fect.	Trees.
4.....	2722
5.....	1742
6.....	1210
7.....	889
8.....	680
9.....	537
10.....	435
11.....	360
12.....	302
13.....	257
14.....	222
15.....	193
16.....	170
17.....	150
18.....	130
19.....	120
20.....	108
21.....	98
22.....	90
23.....	82
24.....	75
25.....	69
25.....	64
27.....	59
28.....	55
29.....	51
30.....	48
31.....	45
32.....	43
33.....	40
34.....	37
35.....	35
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The above will be found useful many times,
and we therefore put it on record for the purpose
of ready reference.

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To STOP BLEEDING.—Asa Kemper, of Ross county, Ohio, writes to the *American Agriculturist* that bleeding from a wound on man and beast, may be stopped by a mixture of wheat flour and common salt in equal parts, bound on with a cloth. If the bleeding be profuse, use a large quantity, say from one to three pints. It may be left on for hours, or even days if necessary. In this manner he saved the life of a horse which was bleeding from a wounded artery; the bleeding ceased in five minutes after the application. It was left on three days, when it worked loose, was easily removed, and the wound soon healed.—*Ex.*

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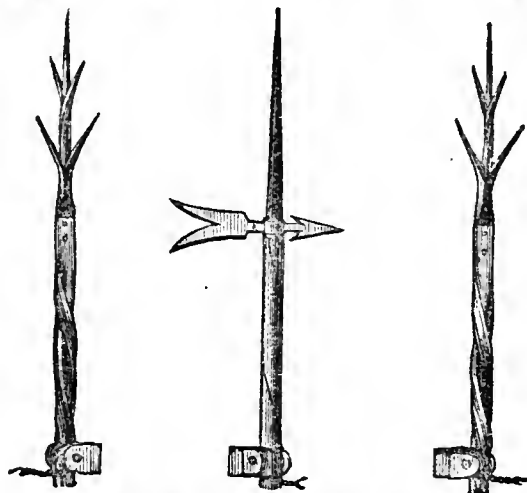
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THE ILLINOIS FARMER.

VOL. VI.

SPRINGFIELD, OCTOBER 1861.

NO. 10.

October.

We are now in the midst of autumn. In some parts of the State the frost has arrested further growth of the great family of farm products, while in others the growth is being continued. In taking a look over the State we can but be thankful for the bountiful products in all parts of the State. The wheat crop, on the whole, has been very good, in some parts bountiful, and nowhere a failure. It is too early at this writing (Sept. 3) to speak with certainty as to the corn crop, but at best it will be much below that of last season, and may be but a moderate one should early frosts occur, and which from the character of the season thus far we may be led to expect.

The potatoe crop will not be over, if up to an average on account of the small breadth planted. The yield is likely to be good.— Sweet potatoes are unusually late, and at this date none in market in this part of the State, though they are very vigorous at this time. Broom corn has not been as largely, though we hope more profitably cultivated than last year. Flax has been more extensively sown and the crop is good. Sorghum has received more than usual attention, and promises a good return, and will go far to supply the State with sirup.

Business is beginning to assume its wonted channels, and confidence is measurably restored. The war has done its worst, so far as the derangement of business is concerned, and now that we know what is to be done, it will be vigorously prosecuted to its finality.

Orchard planting, we fear, will be neg-

lected, and we therefore call attention to the subject. We believe there is no business offering so good an investment as the culture of the apple and small fruits by the selection of proper varieties and locations to be followed with suitable culture. We have forty acres planted to orchard and are preparing twenty more which will be set on the plan of Mr. Coe, at Port Byron.

Corn culture at the present rates has little encouragement, and we must turn a part of the labor devoted to that into other channels. Should the manufacture of flax become extended, the West will be called upon to supply the staple. We have no fears but that the world will want all the products of the prairies, but we must make a judicious selection of that which will pay us the best. Tobacco in some of our southern counties has paid well, and we have been surprised that its culture has not extended north.— We, as a State, are sending out too much money for things that we can as well grow at home at a better advantage than to purchase them, and among these stand prominent fruits and among manufacturers cheap woolen goods of our common wools. For this we have an abundance of water power in the north part of the State, and coal and wood in the south and center.

Sheep husbandry must soon become more common as the long wools come more and more in demand and the value of mutton for food is better appreciated.

The active duties of the year will soon be over and we shall have time to count up the results. That they will, on the whole, prove satisfactory, we have no doubt.

ILLINOIS LANDS.—As a State for cheap farms, which can be easily tilled, and which will give the largest returns for the least amount of labor, Illinois stands pre-eminently above any other State in the Union—or out of it. It suffers none of the severe frosts of the more northern States, and none of those terrible drouths that scorch the country further west. A vast quantity of land along the line of the Illinois Central railroad still remains unsold, which can be bought at from \$6 to \$25 dollars an acre on long time and the most favorable terms. Indeed, the Illinois Central Company, on account of the recent political and currency troubles, are receiving from farmers in arrears, their corn and wheat, which is credited as cash on their notes. No such terms or indulgence can be found elsewhere.—Real estate dealers generally insist upon the letter of their bonds. To those who wish to settle and cultivate farms, Illinois offers inducements that no other State can.—*Railroad Gazette.*

An Unofficial Look among the Farms and Nurseries.

(Continued from page 258.)

Returning to the city we took the night train to Cortland, in DeKalb county, to examine the farm of

S. W. ARNOLD,

Situated four miles south of the village It was the first day of August and the harvest sun continued to pour out his ardent heat, for the past three days, bringing forward the later sown grain rapidly, and from its extreme heat driving the laborer to the shade or made him a laggard at his work as he breathed the heated air. Cortland is on one of the largest prairies in the north part of the State, and yet it is nearly all under culture, not in large farms, but in those ranging from eighty to one hundred and sixty acres. Spring wheat is the great staple, and the music of the busy reaper come to us on the morning air from all directions. Coming from the great corn zone and passing through the woodlands of the lake shore where the small farms are carved out with the axe, it is a new feature to see field after field of ripened wheat with an almost unbroken continuity, only now and then a green spot of corn or may be a meadow or pasture to vary the landscape. The fences are of post and boards; three boards of six inches in width make the fence; of course, no pigs or sheep are allowed at large. Of sheep we saw none in the four mile drive, while each farm has its small hog pasture of one or two acres, where the lazy porkers take their ease and grow fat. Good Suffolks are the favorites, with now and then a cross of Berkshire by the way of variety. No better lot of hogs can be found anywhere than is now owned

by our farmers, and it is money thrown away to send out of the State for better, for better cannot be had.

ORCHARD PROTECTION.

About two miles south of the village is an orchard of two or three acres well loaded with fruit, and to every appearance as healthy and productive as the best on timber land, but this orchard is completely sheltered by a belt of locust trees two or three rods wide; this is the secret, and when our prairie farmers wish to grow fruit they must not forget that protection is one of the conditions of success.

BOOK FARMING.

On the way our driver pointed out to us several "book farmers," men who wrote for the papers and farmed it according to convenience, who calculated their products by the number of acres planted without regard to culture. One was farming and studying law. If his law turns out as poor as his crops he will be but a poor specimen of the genus *shyster*. Others went upon the plan of farming made easy, and judging from the light crops, they will have an easy time hauling to market. But the majority of the farmers of this four mile drive are successful, thrifty farmers. They lack barns, orchards and timber belts, it is true, but we were told that a few years since most of these men made their claims far out on the prairie where land could be had at a dollar and a quarter per acre, and in most cases have from these acres paid for them and are now on the high road to prosperity.

A HUNDRED AND SIXTY ACRE FARM.

The farm of Mr. Arnold contains a quarter section, is somewhat rolling, three-fourths of it good grain land and the balance pasture, but when drained will produce good corn. The soil is a clay loam, with a stiff clay subsoil and adapted to the use of the mole drain, a few hundred rods of which would supply an abundance of good stock water. He has in crop:

45 acres of.....	China Tea Wheat.
12.....	Rio Grande Wheat.
3.....	An early bearded variety.
9.....	Oats.
8.....	Corn.
1½.....	Potatoes.
1.....	Sorghum.
1½.....	Garden.
81 acres.....	In crop.

The remainder is unbroken and used for prairie hay and pasture. The farm is new, having been commenced five years since, and from its own products made the payments of the soil at five dollars per acre, and also the present improvements. Mr. A. is but an invalid and capable of but little labor, but with the aid of two small boys and hired hand, with his good management he has succeeded even in the face of the hard times, of which we have heard no inconsiderable complaint during the years 1857-8-9, but during all of those poor seasons Mr. A.'s crop was good, most of which was due to his better mode of farming.

CULTURE OF SPRING WHEAT.

So soon as the wheat is cured enough to stack, it is hauled from the field and one of the boys puts the team to the plow and the stubble is at once turned under, and even now, at this early date, about one-third of the grain land has been turned over, while not over two-thirds of the whole is cut. It is astonishing how soon the seeds of weeds spring up after the grain is cut and the sun allowed free access to the soil, and so soon as they are well out of the ground Mr. A. deems the best time to turn them under with the stubble. The scattered grain at once springs up and gives him a good supply of the best of fall feed for his stock, and in spring the land is in fine condition for corn, wheat or oats. His corn is innocent of weeds and without further plowing is ready for spring wheat. The nine acres of oats will be followed with corn next season. He sows his spring wheat before the frost is all out of the ground, not waiting for the ground to become dry and settled. August plowing and March sowing is his essentials of success in the culture of spring wheat, and from his success we must admit that they are of no small value.

OATS

Are not to be sown so early, but the same system of plowing is to be observed. Oats will rot in the ground if sown too early, or when the ground is muddy, but not so of wheat. He sows four bushels of seed to the acre, of the Black Tartarian, or as sometimes called horse mane or side oats. Judging from the appearance of the crop we think he uses too much seed, and would do better with two and a half to three bushels to the acre. The sowing is done broadcast with the use of Cahoon's hand broadcast seed sower.

WASHING OF WHEAT SMUT.

The seed wheat had been washed in brine, but

this had not been made as strong as it should have been, for we observed more or less of oats through the crop, and in the Rio Grande considerable smut. Now, had the brine been strong and the skimming process thorough, neither of these would have been seen. There is no good reason to have either oats or smut in spring wheat while the remedy is so cheap and simple.

CHINA TEA WHEAT.

This is a beautiful variety of wheat and gives promise of being the most valuable among our spring wheats. The heads are long and well filled, the straw bright and strong. We don't like its long beards any better than the Rio Grande, and it has the fault of shelling badly if left standing too long before cutting. But for its fine yield we shall make the Club give place to it next spring, and shall endeavor to cut it so early that we may not lose by its shelling propensity. Its quality for flour stands at the head of the list. It was said to have been taken from a chest of black tea some fifteen years since, by a gentleman in Rensselaer county, New York, who obtained some six or seven kernels at the time, and from which the present supply has been derived. We saw several fields of it in the neighborhood, and plenty of it can be had for seed at the price of other good seed wheat.

THE HOT WIND.

We have before mentioned the effects of the two days of hot wind on the fruit trees near the lake shore; here its effect was to rust the foliage of the wheat at the time of heading, and so serious was the injury to the leaves that most farmers despaired of a crop, and the common report was that the spring wheat crop of Northern Illinois was ruined by the rust, but the stem and head remained uninjured; and the result is, a fair crop of wheat of an average quality. The yield will range from eight to fifteen bushels, while some fields like these of Mr. Arnold will probably reach twenty bushels per acre. Fruit and shade trees were injured at the same time; the heavy wind appeared to whip out the leaves like the wearing away of a calico flag, doing more damage from its force than from other causes.—The orchard before noticed appeared to escape its bad effects, while the locust trees thirty feet high were pretty much denuded of the leaves.

HARVEST BEER.

While in the harvest field, Mrs. A. at ten, and again at four o'clock sends out a lunch to the harvesters. Accompanying the lunch is a jug of

what she calls harvert beer, some of which we sampled several times during our stay, and for this style of weather found it very agreeable. It is made as follows: One gallon of water, a half pound of sugar; oil of spruce to flavor to taste; add a little yeast, shake it well and put in jug and set in cool place. In from six to twelve hours it is ready for use; it will keep about two days.

THE GARDEN

Occupies one and a half acres, and is the best farm garden that we have seen thus far in our journeyings. Rhubarb, asparagus, onions, beets, peas, Lima beans and early potatoes were all in their glory. From these the boys had sold at the village, to the amount of seventy-five dollars to this date, and that without having apparently lessened the stock. In a year or two more the long rows of small fruits will add to their income in no small way. For the first time except in our own grounds we find the Lima beans growing without poles, and the boys say they do quite as well. Other farmer boys will do well to make a note of this consoling fact, for it will save them no small amount of labor. The garden is arranged for working the long rows of vegetables and small fruits with a horse. Here we again meet with large sized dwarf apple trees without fruit, while dwarf pears of the same age are bending beneath their loads. The Louise Bonne de Jersey, White Doyenne and Bartlett stand again at the head of the list. The Black Cap raspberry is a favorite, as it is in all prairie gardens where it has had a trial. The garden is protected by belts of locust.

THE ORCHARD

Has been set but two or three years and contains two hundred and twenty-five trees, to be re-inforced with five hundred more next spring, which are now in the garden ready for the transfer. The Lombardy poplar is to be extensively used about the orchard to break off the winds.

THE STOCK

Consists of two span of horses and brood mares, three colts, four cows and twelve head of young cattle. The piggery is more extended in proportion, and contains fine specimens of a cross of Suffolk and Essex. They are all fed on meal, the slops from the house and refuse of the garden. The stable, sheds and tool house are cheap, yet efficient structures, waiting the development of the mine to present more ample buildings.—

The fences are of the class before noticed, with the addition of an abundant supply of good well made gates.

THE FRONT YARD

Is well laid out and filled with fruit, ornamental trees, shrubs and plants. To those who say they have no time to attend to these things, we will point to the well made walks, grass plats and flower beds of this farm house. The time will come; in fact, is not distant, when to be entitled to be a good farmer there must be a good yard and garden as the first requirement in the creed.—The side of the yard is flanked with twenty-five dwarf and the same number of standard pears, many of them loaded with fruit, but like all selections of pears, containing too great a proportion of poor varieties. A half dozen fine evergreens are not the least of the attraction in these grounds.

Mr. Arnold is a direct descendant of Roger Williams of Quaker memory, and like his progenitor, with Quaker proclivities. He believes in using brains as well as muscle, in farming, and has demonstrated their value. There is no overworking, no driving or fretting, but a steady perseverance and to save as he goes. With a library well stored with useful works and a good supply of newspapers, himself and boys find ample time to read. Their home is beautiful and attractive, consequently the village store nor the village grogery have no attraction for them, and they will yet write their names in the history of the agricultural progress of the State.

At two o'clock we took the train for Cottage Hill to take a look at the large orchard of

J. W. WAKEMAN,

Situated about one and a half miles northeast of the station. The readers of the FARMER will recollect that Mr. W. is the owner of the large orchard of the May Cherry at this place, of which we have before made mention. Mr. W. was not at home, and his son Bradford, one of the most industrious and practical young orchardists in the State, showed us through the extensive grounds. The *hot wind* before alluded to done no small amount of damage to the cherry crop, and the fruit fell from the trees as though a hard frost had cut them loose from the footstalks. The cherry orchard is protected on the south and west by a heavy belt of locust and other transplanted forest trees, now twenty to thirty feet high, while the slope of the land is to the northeast. The trees are apparently perfectly sound and making a good growth, and next season we

doubt not they will turn out hundreds of bushels of fruit. The orchard is also in fine condition, most of it was grafted standard hight, say three feet high. The "hot wind" reduced the crop more seriously than that of the cherries. This orchard is one of the largest in the State and is certainly one of the most vigorous and promising. Most of the soil, except near the house, is a clay loam with a tenacious subsoil rather retentive of moisture. Before setting the orchard, lands were so plowed that the dead furrows were made on the line of trees; the next plowing reversed this and the trees were set in a furrow opened by the plow over this dead furrow, and were mainly covered with the plow, sufficient earth having been thrown on to the roots with a spade to hold them in place, repeated plowings have thrown up a heavy ridge against the trees, and now they must be over a foot of earth above the original collar of the tree; below this the drainage was made good by the old dead furrow. The whole is to be mole drained between each row of trees. This may be called deep planting, but when we take into consideration that the trees have all made a vigorous growth and show no signs of lagging, we may come to the conclusion that in well drained soil deep planting if not the best is certainly not the worst. In this case the dead furrow between the rows are at least two feet below the earth at the base of the trees, and as the slope is gradual it already affords good drainage. He now proposes to put the mole three feet below this dead furrow, which will make it an average of four feet. This will require about one hundred rods to the acre and at a cost of, say ten dollars. When this is done we apprehend Mr. W. will have one of the best paying orchards in the State. As much has been said in regard to deep planting, we wish to recall to mind the previous preparation in regard to draining. In anything like low grounds, or those not having a good slope, we would recommend planting on the surface and throw successive furrows on to the trees, so as to obtain good drainage, but when the land is underdrained would prefer the flat culture.

The grounds of

LIEUT. GOV. HOFFMANN

Adjoin those of Mr. W. on the east. Forest tree planting has been the Governor's hobby, and one that he has successfully rode, and his grounds wear the most inviting appearance just now, when shade is at a premium, with the thermometer at a hundred under these leafy treasures. A

liberal sprinkling of evergreens have added much to the beauty of these extensive grounds.

Late in the evening we again took the train bound West, and about midnight arrived in the village of Oswego, on the beautiful Fox river.— We were sent to the principal hotel, which is miserably kept by a man whose name we were determined to forget before dinner; but we fear the effect of the bad breakfast did not wear off until we sat at the bountiful board of Mrs. S. G. Minkler. To ride part of the night in such hot weather, to swelter the rest of it in a small room just large enough for two beds, and then to be served with villainous coffee, tough steak drenched with rancid butter, with a lump of the same to grease your sodden rolls, flanked with eggs fried in the same delectable stuff, is about enough to make even the pretty village of Oswego look as though seen through a smoky glass.

A drive of four miles brought us to the nursery and orchard of

S. G. MINKLER.

The orchard contains fourteen hundred trees. The aspect is to the northwest, and protected on the north by the forest and also at a short distance to the south and west. The broken nature of the country along the left slope of the Fox river tends also to aid in breaking off the winds from the south and west. The soil is a clay loam, though varying in character, but all highly charged with lime, this part of the country lying on the Niagara limestone belt. Fifteen of the trees have been set twenty years; they were seedlings and top-grafted; some of these trees are dead, and all showing signs of decay. This does not argue that top-grafted trees are longer lived than those root-grafted. Fifty of the trees have been set fifteen years and the remainder at intervals every year since. All of the sizeable trees had set full of fruit, but the "hot wind" came and a large part of the young fruit fell off. Last year he had a very full crop. Mr. M. does not like to give up the old Rhode Island Greening, and we must confess that in his soil the trees are fine and the fruit rather abundant, yet we could not recommend it on common prairie land. The Yellow Belleflower is a favorite, nor can he see any difference in the value of root and top-grafted trees, both of which he has had a long time in bearing. The Winesap, Minkler, Keswick Codlin, Dutchess of Oldenberg, Early Harvest, Red June and Raules' Janet are especial favorites. The Red June is a small tree and can be set close. The Rambo is a little tender, but

would plant it if he had to replace the trees every dozen years. Smith's Cider is a prolific bearer and valuable; it is an excellent table apple, and from the word cider being attached to its name people have overlooked its value for both cooking and the table; Yellow Injestrise is very hardy and productive, but he thinks too small for market. We take the responsibility to say that for those without orchards this variety should not be omitted, for its early and abundant crops. Benoni and Mother both first rate; the first named should be in even a small collection; Wagner highly valued; English Golden Russet and English Russet profitable. Baldwin all dead and of no value. Summer Queen and Early Pennock are also ranked among the staple varieties. Boston and American Golden Russet both too tender. Esopus Spitzenburg and Fall Pippin both shy bearers, but produce fine specimens—not profitable. Grand Sachem, Domine and Willow Twig, all valuable. We could make a long list of the poor paying sorts, but suffice it to say that a large part, in fact, nearly all the trees set the past ten years are of the varieties above approved. The orchard of Mr. M. is strictly a commercial one, and no great amount of fancy varieties are planted. He has tested a large number of varieties, many of which gave out in the winter of 1854-5, and of course have been dropped. The Fameuse and Holland Pippin have not had a trial in his grounds. The trees are set two rods apart each way, and while young cropped to corn.—Orcharding to Mr. M. has proved highly remunerative; his fruit is hand picked, and always commands a ready sale.

THE NURSERY.

In the nursery the trees are grown stocky and with low heads, say two to three feet. The varieties are mainly those above named.

The orchard and nursery are parts of a large farm which is carried on to good advantage. Mr. M. has one of the best barns in the State, and for sheep, pigs, horses, mules and neat stock is not easy to be beat. The day, though sending the mercury above a hundred in the shade, was pleasantly, though rather laboriously spent in looking through his well kept grounds. As a farmer and orchardist Mr. M. is among the most successful; he has done much towards establishing the fact that an abundance of fruit can be furnished at a cheap rate and at the same time pay a good profit to the cultivator. A proper selection of varieties, aspect, shelter and good culture are required.

MUCK FOR MANURE.

Mr. M. has a large pond or muck hole lying near the grove and where his stock have an abundance of water. This muck is hauled to the up land and treated as manure by spreading, as hauled direct from the pond it is found of equal value with manure, and for wheat and clover is of great value when applied as a top dressing — Throughout the Fox river valley there are hundreds of similar ponds which in time will prove a mine of wealth to the wheat grower. At twelve o'clock at night we parted with Mr. Minkler at the Oswego station, and took the cars for a night ride. The Rock Island and C. B. & Q. railroads cross each other near Wyand, and in going to Rock Island, instead of having a stopping place at the crossing, passengers must get out at Wyand and take a mile drive in an omnibus to Pond creek on the Rock Island road. All this is decidedly pleasant about three o'clock in the morning, especially when a thunder shower is just in the offing and ready to pour down on your devoted head. We do not know which of these roads is to blame for this contemptible arrangement, and we can only wish that they lose no small share of travel in consequence. Some railroads have yet to be taught that a course of policy that would ruin an individual will have the same effect on them. When we again visit Rock Island we shall endeavor to do so without crossing over to Pond creek—one experience of that kind is ample. We arrived at Rock Island in time for breakfast, and soon after had the pleasure of meeting our old friend D. F. Kinney, accompanied by Mr. C. H. Stoddard, who had entered his pear orchard for the inspection of the Committee. We should have observed that business detained Mr. Chase in Chicago, and that Mr. Hull and ourself now constituted the working part of the Committee.

The bottom lands of the Mississippi at this point are not very wide, and we soon commence ascending the bluffs that overlook the river, and a grand sight it is. You look up to Moline, the to-be Lowell of the West, and above and below the beautiful scenery that make up the *tout ensemble* of the Father of Waters. The bridge over which at no distant day shall trundle the riches of the Orient—the beautiful island that lies so quiet in her repose may ere long resound to the clang of mighty forges, fashioning out the sinews of war, to guard the eagle of liberty; these were to us beautiful in their present and pleasant in their prospective.

The pear orchard of

C. H. STODDARD

Is about three-fourths of a mile back from the bluff on a nearly level plain of considerable extent. The soil is a whitish prairie drift, similar to the land in the basin of Egypt. They have here also suffered with the *hot dry wind* of the 14th and 15th June, doing damage to fruit and foliage; at this point it was followed by a frost on the 17th and several days of cold weather.—Most of the trees were well set in fruit, but at that time it fell off rapidly.

The orchard contains one hundred and seven standard pears, six years set. The land has not been underdrained, and has been cropped to corn. The trees have made a remarkably fine growth. They are mostly White Doyenne, Bartlett and Stevens' Genessee. The Bartletts have a fair show of fruit, proving it as popular on its own stock as that of the quince. If no casualty should overtake this orchard it will soon produce hundreds of bushels of pears. It is the purpose of Mr. S. to tile drain the orchard. Tile is made near by of the common brick, but as the demand increases the tile machines will come into use. The nursery of

D. F. KINNEY

Is adjoining Mr. S. on the west. The plain was formerly covered with a light growth of timber, and in many places is yet standing, offering a very good protection to the orchard. In his fruit garden is a large number of dwarf apple trees six years set, and now presenting a good crop of fruit. This is the second place on timber land where we have met the dwarf apple doing well. The Dutchess of Oldenburg is especially fine. Mr. K. complains of the Brown Thrush which nests in his trees in large numbers, and preys upon his fruit. We hear complaints of birds in all locations near the forest, but little or none on the prairie.

In the garden of Mr. Dailing we saw dwarf pears eight years set, loaded with fruit, and two Flemish Beauty Standards, but five years set, bending with their loads of beautiful fruit.

Port Byron, some eighteen miles up the river, was our next place of visit, and we parted with our Rock Island friends in the morning to visit that locality, and had the pleasure to meet

MR. A. S. COE.

At the depot with his carriage, ready to drive us to his farm, which is some four miles distant to the northeast.

The land near the river is very much broken, but from its ready access to the river market, it had been settled at an early day. The ridges run at right angles to the river, and present the appearance of having been cut away by the slow process of heavy rains. The soil being quite sandy would seem to favor this idea. The orchard occupies the crest of two ridges and the slopes and space between them. The drainage, except near the bottom of the valley, is perfect, requiring no underdraining; in this respect it differs from the ordinary prairie soil. It is what might be called a warm quick soil. The trees for some forty acres of the orchard were common root grafts, set eleven years ago in the nursery, and at two years reset in the orchard. The remainder have been set from time to time up to within the past two years, making in all seventy-five acres, which, at twenty-four feet apart, is seventy-five trees to the acre, or an aggregate of five thousand six hundred trees. To stand upon one of these fruit crowned hills and look down the long slope, and up the opposing hill a half a mile distant, and view the stately rows of the apple laden with fruit, is worth a long distance of weary travel to see. The peculiar topography of the ground, the size and form of the trees, all lend their aid to charm the beholder. The sun, which had all day glowed like a furnace, was just setting behind the bluffs, to the west of the great river, as we drank in the inspiring scene—the last day of the week, which had been one of arduous trial, amid the blazing heat of the August sun, no wonder, half invalid as we are, that the day of rest, in the very temple of Pomona, was hailed with delight, as we stood among those sentinels of health and saw the light of day fade out into the night.

This orchard has been trained on the non-pruning system, and the trees branch from and near the ground. It has been but nine years set, yet it has produced thousands of dollars worth of fruit.

THE FIRE BLIGHT.

As we approached the Mississippi river from the east, we saw specimens of the fire blight on the apple trees, first a faint tinging of the terminal shoots with the blackened foliage, and as we came into the valley it became more common and more destructive to the trees. Now and then a pear tree was like affected, and in the grounds of Mr. Coe we find some varieties seriously damaged, especially is this the case with Smith's Cider, by the way, otherwise, one of the most

desirable. The Black Vandevere that was extensively planted at an early day, is in a worse condition, but we can well spare it as it is a worthless fruit at the best.

THE ORCHARD.

Was set with two year old trees branched at the ground, that is, root grafted trees that had never felt the knife after grafting them, were set twenty-four feet apart each way, with flat culture, and the ground cultivated in corn for the first five or six years, since then they have been sown to buckwheat and plowed shallow, say two and a half to three inches deep. The buckwheat is not harvested, it grows thin and rather sickly in the shade, but has a most excellent effect by keeping the soil open and porous, and serves as a mulch in winter. There has been no time lost by getting the trees up to form a head, and we may safely say that their nine year old orchard is as large now as it would have been at twelve, had the usual mode of pruning been adopted. Here, then, is a gain of three years, which, in a country almost destitute of fruit, is an object of no small importance. Our State Horticultural Society has been for years discussing this subject of lower heads, which most of the nurserymen who have advocated it, have not had the courage to brave public opinion and grow their trees in this manner, but have continued to cater to public opinion for fear of compromising their sales. We talk of eastern grown whips that are peddled through the country, but we can assure these same peddlers that they can find thousands of these same whips grown here that will pass for eastern trees without the least suspicion. We have never until this writing been identified with the ultra low headed orchardists, but have advocated it so far that we could cultivate under the tree, but here is a proof of its value that cannot be denied or set at naught, it is true that with some varieties, such as Willow Twig, Winesap, and Yellow Bellflower that send out their branches at the surface, are too low on account of spreading habit, and should have their lower branches about a foot from the ground, so as to allow of the more convenient gathering of the fruit, while the Rambo, English Russet, and the more upright growers can be headed at the surface with impunity. We do not promise that we will not grow trees to suit the taste of our customers, but our own planting hereafter shall be on this plan. Trees thus grown are safely protected from high winds, for as the wind cannot get under their heads, the fruit is not thrown off as is usually

the case, and in this orchard there are but few windfalls, though the trees, many of them, are bending to the ground with their loads of fruit. The same *hot wind* so much complained of, severely lessened the crop on most but not all varieties.

VARIETIES.

The Winesap is one of the greatest favorites, but does not produce full crops every year, and this year is one of the least. Sweet Bough is a moderate bearer, but the fruit is fine—not on the whole considered profitable. The Early Harvest is also thrown out, and its place occupied with White June, which is a rampant, upright grower, and produces good annual crops, while the Early Harvest bears alternate years moderate crops only. The Domine is also one of the best paying varieties, and with its long, slender leaves, quite ornamental. The Rambo, on dry ground, is valuable, but in low situations, worthless. The tree is tender, but with the Minkler Mr. Coe would not part. He says it should never be root grafted with it, while Raules' Janet should always be root grafted. We have frequently observed that in top grafting Raules' Janet, that it makes a very slow growth, almost dwarfish in its habit, and this may account for it. As we shall soon give our views on root grafting, we will not pursue this subject further at this time. The Rhode Island Greening is of little value with him, although the soil is sandy. The blight is the drawback to Smith's Cider, which would otherwise stand among the best. Willow Twig is one of the most profitable; it is always hardy and productive. Red Astrachan, Early Pennock, Keswick Codlin, and Dutchess of Oldenburg are profitable summer varieties. White Winter Pearmain, Yellow Bellflower, Little Romanite and Swaar are all valuable for the winter.

About four miles to the southeast, and more out upon the prairie, is the orchard of

WILLIAM C. PEARSAL.

An old and valued friend of the writer, and to whose grounds Mr. C. had the kindness to drive the committee. The home orchard covers eighty acres on the home farm of five hundred and forty acres; on another farm, a mile distant, ten acres are also planted to apple orchard—it will thus be seen that Mr. P. has an abiding faith in the value of fruit growing. The trees are part upon the low head, and part standard high system, but Mr. P. does not hesitate to give a wide pre-

ference to the low heads. His favorite summer varieties are the Keswick Codlin, Early Pennock, Dutchess of Oldenburg, and Sweet June; for fall: Rambo, Fall Wine, Fallawater and Fameuse; winter: Brabant, Bellflower, Smith's Cider, though of late it has been seriously injured by the blight, Winesap, Willow Twig, White Winter Pearmain, Little Romanite, Yellow Bellflower, Domine, and Maryland Queen. There are other varieties on trial that may prove equally valuable, but these have been so thoroughly tried that they have become favorites. Raulse's Janet does not give Mr. P. satisfaction. Greening, Esopus, Spitzenburg, Baldwin, and many others have failed and been discarded.

PEARS.

Mr. Coe has not succeeded with the pear, while the trees planted by Mr. P., in well sheltered locations, have done well, and at this time he has a good stock of fruit. Mr. P. says it is useless to plant pears without having them well protected from the wind. Bartlett, White Doyenne and Flemish Beauty do well either as standard or dwarfs.

ASPECT.

A portion of the orchard was set on flat land but most of the trees have either died or proved barren by frost, while those on the swells have done well. The soil is a sandy loam with an open sub-soil, requiring but little more than surface drainage. All this part of the land lying between the Rock and the Meredosia rivers is more or less sandy or a sandy loam, and produces abundant crops of spring wheat and oats, and the farms are but a succession of fields of these cereals, now mostly in shock, with only now and then a piece of late oats uncut.

On our return we passed a seedling orchard well loaded with fruit, but the quality is so poor that it is of little value except for cider.

A FRUIT CAVE.

Mr. Coe had just completed a fruit cellar or cave, a description of which will be of interest to our readers. It is about thirty rods from the house on the northeast slope of the hill. The walls are of limestone, eighteen inches thick, and arched over with hammered stone, laid in mortar and cemented over; on the outside it is thirty-seven feet long, thirteen wide, and sixteen high, to be divided into two stories, the lower one of which is sunk in the hill, the upper part is to be covered with earth, roof shapen, and

turfed with blue grass. It stands in the midst of the orchard, and the large trees shelter it from the sun. It is well arranged for ventilation and cannot fail of being one of the most admirable of places for the preservation of fruit. In one corner will be a bin of ice, which will add to its coolness.

HOGGING DOWN.

Mr. Coe has a good opinion of the value of clover in the orchard, to be pastured with swine. The swine will give the surface a partial culture, and the clover roots, which are biennial, will add value to the soil by keeping it open, and by decay enrich it. They will also gather up all the early windfalls, many of which contain insects, and thus prove of benefit.

PRESERVATION OF FRUIT.

The fruit is hand picked, and the summer and autumn apples taken to market in a spring wagon. The winter apples are put in barrels, the heads firmly pressed in and headed up; there is no sweating of the fruit before putting up, but it is picked when dry by hand, and put into the barrels at the tree, and a few holes bored for ventilation; these are drawn to the house on a *stone boat*, and left out under the shed until the weather begins to freeze too solid to plow, when the barrels are put into the cellar. In this manner they keep remarkably well with little trouble, and seldom repacked for sale.

TO ORCHARDISTS.

We most especially commend the practice of Mr. Coe in orchard planting and management. He has certainly been most eminently successful with the apple. With the least labor he has one of the best, if not the very best, orchard in the State, and we are satisfied that on the prairie it is the best mode that can be adopted. Here is no swaying of trees to the east, no scalding of the west side of the trunks in the sun, to make lodgment for borers; no sweeping off of the fruit by high winds; no long days of toilsome labor in pruning; no needless waste of time in balancing the heads; no spoiling of the fruit by its falling a long distance to the ground; no tedious efforts in picking; and, to crown all, we have an early fruitage and abundant crops. Let us hereafter throw aside the whips, or cut them back within a foot of the ground, to send out new heads, and to plant only such varieties that have proved hardy and abundant bearers under ordinary exposure and culture. In such an or-

chard, belts of trees for protection are of value, but much less so than with high heads. As an evidence of this we saw an orchard within two miles of Mr. Coe, well protected by locust belts, the trees had heads sufficiently high to drive a team under them, had been set several years longer, but yet is not as productive, though the trees are very thrifty, taking into consideration their manner of treatment.

Quincy was our next point of visit, but the war played the dickens with the river travel, and it is now but a waste of waters, with only a semi-occasional steamer plowing its placid surface, we therefore retraced our steps by rail to the memorable "Pond Creek," and crossed over to the C. B. & Q. Road at Wyanet, and at one o'clock in the morning of the 6th August, arrived in Quincy, and put up at the Adams House.

SORGHUM.

Nearly every farm in the west part of the State appears to have its acre of Sorghum, and we saw several mills and boiling houses, where it is worked up on the shares. From what we saw and heard of the extent of the planting, the west part of the State will nearly or quite supply the local demand for sirup the coming year. The crop is rather late like that of corn, but is well grown, and must turn out a good yield. As a general thing the farmers understand its manufacture, and since the chemists have let them alone, will make a good article. Sugar making is yet in the distance, at least its profitable demonstration.

BROOM CORN.

Immense crops of this was grown last season, and the price broke down so badly, carrying with it numerous growers, that this season very much less was planted, and we shall look for a brisk demand.

THE MISSISSIPPI BOTTOM.

From Quincy, our route led for nine miles along the river bottoms, the road running just under the high bluff that shoots out the prairie to the west. The heat was intense as we rode out of city down under the shadow of those cliffs, clothed with the giants of the forest, and were met with the cool breeze that came up from the river; the birds made merry music as if enjoying the scene. The river is away to the far side of the wide sweep of the bottom land, now dotted with vast fields of corn, and of the new plowed stubble, now being prepared for winter

wheat, for here winter wheat, year after year, is sown on the same ground, and from the appearance of the large stacks of grain, must produce abundantly. The lower lying portion of the bottom are yet in timber of the heaviest description. Some excellent springs burst out from the rocky bluffs, mostly in the sandstone shale, which has overlaid the lime. On our return in the afternoon, the scene had changed, the wind had ceased to come up from the river, the sun poured its fiercest heat unobstructed on our road, the dust rose on all sides and covered us as in a fog. The sweat poured from our horse, whose fastest gait was a slow walk. The birds had fled from the road side, and nought looked pleasing save the fresh springs as they gushed forth from their rocky beds to refresh the thirsty traveler, and more thirsty horse. The poetry of the morning had turned to dusty, dreary prose.

Ascending the bluffs, a drive of a mile brought us to the farm of

CLARK CHATTON.

This had formerly been heavy timber when Mr. Chatton, fresh from Yankee land, with axe on shoulder, a quarter of a century since, entered its massive aisles of towering oak and maple, and commenced carving out a home for his young family. The small clearing and log house have given place to ample buildings, extensive out-houses, and far-reaching fields. The farm contains four hundred and eighty acres of cleared land, two hundred and fifty acres in winter wheat now in stack, forty acres of apple orchard, twelve to peach, and six to pears, the remainder to corn, meadow and pasture. The whole is divided into fifteen fields, requiring fourteen miles of fence, all of which is of rails, laid in the worm form with stakes and riders, and bid defiance to brutes, while for man it is no small amount of labor to get over, as we had abundant opportunity to testify. The farm is mostly worked on shares by tenants, six of whom have houses for their accommodation. The soil is the greyish white drift, peculiar to the basin of Egypt.

VARIETIES OF WHEAT.

Mr. C. sows the Red Blue Stem and the May or Alabama in about equal quantities. He estimates his crop this year at an average of thirty bushels per acre. Clover grows rank, and is extensively cultivated. Lime is being used, and promises to prove profitable. Even on this lime soil, so Mr. C. thinks, and is making extensive arrangements for burning it on his own land

which, extending to the river bottom, affords fine limestone in the bluffs. We must confess that our own faith is weak in the experiment. In some of his fields he has sown winter wheat continually for over fifteen years, and now when the crop lags, we think a change to grass will prove more beneficial than lime. Mr. C. is a believer in the value of manure, and is careful to spread it upon his land, and as he has some twenty-eight head of horses and mules, one hundred of cattle, and a fine lot of hogs, he has no small amount of it to haul cut. His fences, gates and buildings are all kept in good order and ready for use.

THE PEACH ORCHARD.

Is set eighteen feet each way, the trees are large and full of fruit, but have been badly injured by the late severe winters, and will not last more than a few years at the best, probably this is the last heavy crop that they will produce. They have been set seven years, and have proved very profitable.

THE PEACH GRUB.

These have proved troublesome heretofore, but now Mr. C. has a remedy, hog manure, ashes and tobacco stems, each will drive out the grubs. He has purchased tobacco stems by the waggon load, put them at the roots of the tree in the spring, and no worm will trouble them. Hog manure put at the roots of the tree has the same effect. Tobacco being largely grown in the neighborhood, the stems are cheap, costing little more than the hauling.

PROTECTION.

Though the farm is shut in by heavy walls of forest, yet so desirable is shelter from the wind that Mr. C. is now making a tight board fence on the north and west side of his peach orchard six feet high, to break off the wind.

CULTURE.

Along the rows of trees, three feet on each side, they are cultivated with a one horse plow, while the intervening space of twelve feet is in clover, now being mown and used for hay. Next week he will begin to send his crop to market at Hannibal and Quincy, each equidistant ten miles, from these points dealers ship them east and north, mostly from Quincy by river.

THE APPLE ORCHARD.

The heads of most of his apple trees are four to six feet high, and in many cases show the

effects of the sun on the west side of the trunks. The oldest part of the orchard has been set seventeen years, showing that during his early years of farm life Mr. C. paid little attention to what is now his favorite pursuit, fruit growing. Some of these trees are a foot in diameter, with wide-spreading tops, and look as though they might last half a century yet. To within the past three years they have been cultivated in corn and other crops, but since then, simply plowed and harrowed two or three times during the season.

THE BLIGHT

Is somewhat prevalent on the apple, affecting most varieties more or less; it is also on the forest trees, especially along the ravines and edges of the clearing. On the pear it is quite destructive, and has nearly ruined the whole pear orchard. Trees six inches in diameter, loaded with fruit, were dying with it. Some dozen years since, the same fire blight went through the country, and left but few pear trees in its pathway. As we have only met it along the Mississippi river, we hope it will not travel inland.

VARIETIES OF APPLE CULTIVATED.

American Golden Russet, good.	
Milam,	"
White Bellflower,	"
Early Strawberry,	"
Sweet Butter,	"
Maiden's Blush,	"
Yellow Bellflower,	"
Holland Pippin,	"
Peunsylvania Red Streak,	"
Grannywinkle,	"
Early Harvest,	"
Smith's Cider,	"
Pryor's Red,	"
Ohio Winter,	"
Summer Queen,	"
Raule's Janet,	"
Vandevere	"
Baldwin,	"
Sweet Paradise,	"
Sweet Romanite,	"
Peck's Peasant.	"
G. W. Sweet,	"
English Red Streak, cider,	"
Jonathan,	"
Red June,	"
Yellow Newtown Pippin, best.	
Romanstom,	"
Old Pearmain,	"
Winesap,	"

Virginia Greening, best.

Willow Twig, “

Little Romanite, “

Boston Russet, worthless.

What Mr. C. means by *best*, is the most profitable market sorts.

It will be seen that he ranks Baldwin among his good sorts. He has but few summer varieties, and notwithstanding that Quincy is an important fruit market, yet it is poorly supplied with good summer apples, most of those now in market being the windfalls of winter varieties, and are sold at twenty to thirty cents a bushel to ship north, while good apples, such as early Harvest readily bring seventy-five cents, and are scarce at that.

PRESERVING FRUIT IN BRINE.

Mr. C. has succeeded well in preserving specimens of fruit in brine, especially of peaches. In some he has added a small quantity of alum, to a decided advantage. The fruits to be operated on should be just colored up, but not fully ripe, or at best not in first rate eating condition. See page 229.

In the evening we drove out four miles on the Warsaw road to the farm of

SAMUEL B. TURNER.

And on the morning of the 7th the committee was again full by the arrival of Mr. Chase.

A FARM OF EIGHTY ACRES.

The farm of Mr. Turner contains eighty acres, and fronts the Warsaw road, and is directly opposite that of K. K. Jones, which took the first premium for the best forty acre farm last year. The house is a fine two story brick, with well laid out grounds in front, in the usual style of suburban residences. The fault with these grounds is in the planting too large a proportion of deciduous trees, but they are not so closely planted that this defect cannot be remedied and conifers put in to fill up. The great feature of the place is its Osage hedges, which, with the exception of some twenty rods of post and board, to cross a piece of low ground, is the fencing. They are well made, and proof against any and all descriptions of farm animals. It is handsomely trimmed in the obtuse conical form, which gives it an ample base, and at the same time exposes the leaves to the sun. The most of the fence is made with a single row of plants, but Mr. T. prefers two rows set alternately, thus: * * * *. This gives at once a better base, but for farm

purposes we doubt if it is better than a single line set four inches instead, of two lines at eight inches, the same number of plants are used, and the cost of the setting about the same. Mr. Turner's hedges are all perfect, that is, there are no breaks in them, and but one place where a small dog could get through. and that was for the purpose of letting the ratters through into the next field. The fences are a perfect mass of verdure, armed with its bristling thorns concealed beneath the leaves, but ready, on the approach of an enemy, to dispute his passage.

The hedge should be trimmed twice a year, the first in June and again in September or first of October, but never during a drouth—this has reference only to the full grown hedge. Mr. T. uses a short sythe; one man can trim a hundred rod a day on both sides, and do his work first rate. Trees should not stand in the fence line, especially when young, as the shade retards their growth. Along side of a timber belt it would be different, for there the hedge would have the sun during part of the day.

THE FIELDS.

First is the house grounds well laid out and partially planted, with most of it in blue grass and clover lawn; to the south of this a clover pasture of five acres, and north of the house grounds is the horse pasture in which is one hundred trees nine years set, but not remarkable as to growth or profit. A stiff blue grass sod is not as conducive to the growth of an orchard tree as might be. This orchard is to be broken up so soon as a rain comes to soften the soil, which is now baked hard by drouth and to be sown to winter rye for pasture for the horses, and will permit a better growth of the trees; this will in turn be plowed under and sowed to clover and timothy. But as this orchard is neither planted in the right place or of profitable varieties, a

NEW ORCHARD

Has been set the past spring, to two hundred and fifty trees, mostly winter varieties, at the distance of forty feet each way—a pretty liberal allowance of space, one would suppose. Last fall this land was plowed and subsoiled two feet deep. Deep dead furrows were made and left open through the winter. In the spring the soil was turned back into the dead furrow, the trees set on it and filled in so as to hold the trees, and the planting was finished with a one-horse plow. This, it will be seen is upon the same plan pur-

sued by Mr. Wakeman, at Cottage Hill, and on lands naturally as well drained as this, is a good one. The trees all have low heads nearly upon the plan of Mr. Coe, and like him, used two year old trees. After planting, the trees were liberally mulched with coarse litter. In planting the corn an entire row was left out, for the benefit of the trees, thus to some extent preventing too much shade, while the trees are young. The trees have made a fine growth, and in a half dozen years will begin to make liberal returns. The remaining sixty-five acres is in one field, but is to be subdivided into two. The corn was worked with one of Prof. Turner's two-horse cultivators until the laying by, which was done with a common one-horse cultivator.

THE ARMY WORM.

We heard complaints of this worm as far north as Rock Island, and here at Quincy every one has had sad experience with them; by being prompt with the ditching they were kept out of the corn, though they swept the timothy and blue grass meadows and pastures clean, and as Mr. Turner raises hay for the city market he was a large loser. He says that he had at least a thousand bushels of worms on his little farm, yet he kept them strictly to the grass land. The clover they would not eat, and the result is he will have a small supply of clover hay for his teams.

CLOVER LAYS FOR WHEAT.

Ten acres of his clover meadow as soon as cut was turned over for wheat, and will be again plowed before sowing. By the way, a part of this was left for experiment, and will be turned over the middle of this month and sown at once on the sod.

OAT STUBBLE FOR WINTER WHEAT.

The oat stubble had been turned over three inches deep, to kill the young weeds and to rot the straw, it is to be plowed seven or eight inches deep and sown to winter wheat about the middle of September.

THE LIVE STOCK.

Seven head of horses, five of them brood mares, five colts, three cows and a fine lot of pigs make up the list. The brood mares do most of the work. Among the out buildings is a good substantial granary and an ice house well filled and whose cool blocks are highly acceptable this heated term.

THE GRAPERY

Contains two hundred vines set to stakes six by

twelve feet apart, but this is found too wide and is to be filled in three by six feet. Vines grow very rapidly in all this part of the State, and these are not an exception; they have a fine show of fruit for young vines. A liberal supply of the small fruits are set in the fruit garden. Mr. Turner is a young farmer but he certainly shows that he knows how to manage a farm, and we can assure our readers that there are few as well regulated and profitable farms in the State as his.

We spent one hour very agreeably with our old friend

K. K. JONES,

Of the "Pines," and without going into particulars we must say that we were highly pleased and gratified with his success. He has demonstrated that a man need not be born on a farm to make a good farmer. Mr. J. is driving at the grapes and other small fruits with his usual energy, and the first attempt at a large orchard of the May cherry since leaving that of Mr. Wakeman is on his grounds. He has some two hundred of the trees making a fine growth among his fifteen feet corn, fed from his heaps of compost. He has dozed his small fruits and grapes with the same, and they are making a remarkable growth.

Our next call, though like the last, was unofficial, on our friend J. H. Stewart, of the

QUINCY NURSERY.

Mr. Stewart was born a nurseryman, bred a nurseryman, and is a nurseryman and a horticulturist in every respect. His trees and plants exhibit these facts on every hand, and if there is twenty-five acres of nursery anywhere in the West better selected, better arranged and better cultivated, we have not seen it. The varieties are selected in regard to this latitude and are valuable. The May cherry is largely cultivated, being the only variety found valuable thus far in this part of the State. Mr. S. is doing considerable in the way of grapes, and has selected the Delaware as his favorite. We must think that in some soils this grape does much better than in others. Here it grows nearly as strong as the Isabella. The vineyard contains a thousand vines of Delaware, Concord and Diana.

GRAFTING THE GRAPE.

Mr. S. has been very successful in grafting the grape, for which he uses the Clinton for a stock. The scions have on two to three buds; uses a waxed thread, but no wax otherwise; clefts grafts in all cases, and binds with the waxed thread; covers with earth. Delawares

thus grafted had at this time made over twelve feet of new shoots, besides the laterals. He top dresses his grapes with leached ashes. Next spring he will add two thousand Delawares grafted on Clinton to his vineyard.

STRAWBERRY.

Mr. S. sold one hundred bushels of strawberries the season just closed, mostly Willson' Albany. It will thus be seen that he has some fruit-growing, as well as some tree-growing proclivities.

RECIPE FOR HORSE DROOLING.

As Mr. Turner makes a liberal use of clover, his horses are liable to be troubled with this disagreeable complaint. His remedy is to cut up "burdock" leaves and feed with his oats. On our return to the city, Mr. Chase parted company with us to visit Mr. Chatton, and as his business engagements would not permit of his presence with the committee only as stated. He will probably visit the competitors at his leisure, and thus assist in making up the committee's awards.

THE CLOSE.

Our official visits were now closed, and with a half day's leisure before the time would expire when we could leave for home, we therefore accepted the kind offer of Mr. Turner to drive us about the city.

THE VALUE OF HORSE FEED.

In consequence of the foray of the "army worm" on the hay crop, hay is selling at \$8 per ton; oats, 14 cents per bushel, \$8 per ton; corn, 15 cents per bushel, \$4 40 per ton.

Our first visit was to the residence of

EX-GOVERNOR WOOD.

The Governor was absent at Springfield, but one of his sons kindly invited us to look through the new house and the grounds.

The house is a fine specimen of octagonal architecture, but, on the whole, too much of a house—too aristocratic for a Republican Governor. Too much cut and hammered stone about the walks—too intensely ornamental. We turned to the shade of the giant chesnuts, for though only two feet in diameter, yet their great spreading heads festooned with burrs, give them the appearance of giants—young giants at least, and as they were planted within the present generation, they may yet become old giants in their time. Certainly no shade tree have pleased us

like these, with their fine heads, glossy leaves, and clustering burrs, they have no superiors in stately beauty, and when the autumn frosts shall loosen the footstalks of their leafy garniture, open the husk of the prickly burr, and shower down the nut-brown fruit, we have a combination of the useful and beautiful that should induce us to more fully appreciate this valuable tree. From the top of the house we look far over into the State of Missouri. The white houses of the village of Palmyra are just visible through the blue either that arises over the vast forests that belt in the river. Lagrange, up the river, presents its broken outline of bluffs and river bottom, amid the windings of the great river.

THE DROUTH

Is burning up the vegetation in and around the city, and unless a timely rain should visit them, we would not like to predict the results.

We next called on

DR. MERRICK,

At the north end of the city, and near to the bank of the river, on a bluff a hundred feet above the water. The Doctor has retired from active business, and is giving his attention to his garden. Leafmould, leached ashes, and cow stable manure is being composted in large quantities for his grapes, trees and vegetables.

The drouth is beginning to be felt in his grounds, and the strawberry beds are the first to yield to its influence.

His new seedling UNION strawberry was badly parched up. This strawberry, the Doctor thinks, is bound to win. It is now three years' old, and the past season, on a plat three by six yards, yielded ten quarts at a picking, every other day, during the season. The fruit is dark red and glossy, of large size, stem long and upright, holding the fruit well off the ground,

THE CHICKASAW GRAPE,

A new seedling of the Doctor's, is loaded with fruit, and is the only grape in his grounds free from rot. We will here state that, commencing with the gardens at Centraia, the grapes were found rotting badly in every locality that we have visited, perhaps except those of Mr. Wilson; at Winetka, we do not recollect to have seen any rot on his vines. While all other varieties are rather seriously affected, the new seedling is not touched, even when they are side by side on the same trellis. Even the Delaware are to some extent damaged. This grape has not before been

exempt, and why it should escape this season is a mystery that we cannot solve. The bunches of this grape are long and moderately well shouldered with round and very large berries. The leaf resembles the Isabel. The Doctor says it is a seedling of the wild grapes from the bluff, and was produced before there was any cultivated grapes brought to the neighborhood, and has scouted the idea that it is any other than a seedling of the Mississippi wild grape. It is now eight years old. The wood is short jointed, and of a peculiar color, differing widely from the Isabella, though, as we said before, the leaf is almost identical with it. Whether it will prove as valuable when sent out to other soils, is yet to be proved. A long row of standard pears nine years set, are loaded with fruit, in fact, this soil and climate appear suited to the pear, and with the exception of the fire blight, they appear to be as productive as the apple.

In this row are Buerre Bose, Winter Nelis, Bartlett, White Doyenne, Seckel, Andrews, Oundagua, Flemish Beauty, all free from blight, and loaded with fruit. Of the Dwarf, Beurre Dix, and Beurre d'Amalis, were loaded also. Several varieties were badly blighted, and one large tree, six inches in diameter, had been cut down that day with the axe, killed to the ground with the blight.

On the trellis was vines of the Delaware of this season's growth, fifteen feet long, and was in all respects a match for the Catawbas that are growing beside them. The plants are three years old layers. The climate here is not supposed to be well adapted to

THE CURRENT:

But the Doctor's bushes are partially shaded and thoroughly mulched with corn stalks each Autumn, and have produced crops equal to any at the North. The bushes are very vigorous. There can be no question as to the value of this kind of mulching. By putting it on thick, the weeds are kept down and the ground enriched. With shade and mulching, we know the currant will produce large crops in all parts of the State.

HOMEWARD.

At seven o'clock the whistle gave the welcome sound for "Off home!" It was the close of the three weeks of active, arduous duty, during the most heated term of the season: passing over nearly two thousand miles of rail, devoting but little time to sleep—and most of that on the cars at night,—we might well be excused for wishing for a few days of quiet rest.

THE TOLEDO AND QUINCY

Railroad, commencing at Quincy, forms a part of the great Through Route *via* Springfield, Logansport and Toledo to the East. It traverses the great Corn Zone of the State, and—since the completion of the bridge across the Illinois river at Meredosia—is doing an immense business.

From the Illinois river to the State line it passes under the name of

THE GREAT WESTERN RAILROAD,

and forms the outlet to the Stock regions of the West. There is no road of its length that gathers up so much stock for the Eastern market as these two railroads now in connection by the bridge that spans the river. When the Pacific railroad shall reach the western shores of the continent, this line of road will be among the first to feel its stimulating effects.

On Guard.

At midnight, on lonely beat.
When shadow wraps the wood and lea,
A vision seems my view to greet
Of one at home that prays for me.

No roses bloom upon her cheek—
Her form is not a lover's dream—
But on her face, so fair and meek,
A host of holier beauties gleam.

For softly shines her silver hair,
A patient smile is on her face,
And the mild lustrous light of prayer
Around her shed a moon-light grace.

She pray's for one that's far away—
The soldier in his holy fight—
And begs that Heaven in his mercy may
Protect her boy and bless the Right!

Till, though the leagues lie far between,
This silent incense of her heart
Steals o'er my soul with breath serene.
And we no longer are apart.

So guarding thus my lonely beat,
By shadowy wood and haunted lea,
That vision seems my view to greet
Of her at home who prays for me.

— The flatterer must act the very reverse of the physician, administering the strongest dose only to the weakest patients.

— As the moon, whether visible or invisible, has power over the tides of the ocean, so the face of the loved one, whether present or absent, controls the tide of the soul.

— A fop, just returned from a continental tour, was asked how he liked the ruins of Pompeii. "Not very well," was the reply? "they are so dreadfully out of repair."

Bloomington Nurseries.

The city of Bloomington, "the capital of the Grand Prairie," is situated in the heart of one of the finest agricultural regions in the great Mississippi Valley. Surrounded on all sides with dry, rich, rolling prairie and wood land, comprising nearly every variety of soil, and intersected by two great railroads, which, together, connect with all other railroads in the State—these combined advantages render it the most eligible for nurseries in the State. It is not, therefore, a matter of surprise that this important branch of industrial enterprise has already gained such a foothold in this vicinity, that it is beginning to be designated as the "Rochester of the West."

There are now in the immediate vicinity six flourishing nurseries, and one extensive vineyard, covering in the aggregate over three hundred acres, and embracing every variety of tree and plant needed in the West, or desired by the most fastidious amateur.

We think it may be said, without egotism, that the nursery business is here in the hands of competent men—men who make the business their study, and whose experience and research should amply qualify them for their responsible calling, and whose pride is to cull from the vast domains of Pomona and Flora such of their rich and rare gifts as will succeed here, and will delight their patrons. Men, too, whose *local pride* actuates the desire to create at this point a great nursery center for the West. Aside from integrity of purpose, this should be regarded as an earnest of uprightness and fair dealing.

Upon the foregoing premises, we would invite the attention of the tree-planters of Illinois to Blooming, presuming that if we should be found unable to supply them, our enterprising neighbors surely can. The people of Illinois have at length made the discovery, (though at an immense cost), that it is not necessary to send out of the State for any nursery products they may use.

O. R. OVERMAN.

Yes, and these six nurseries will remain unknown among the graceful swells of the "Grand Prairie," unless the aid of printer's ink is evoked to notify the west of their exhibition.

We presume that not one-half of the inhabitants of McLean county are cognizant of the above fact, a fact that we have good reason to believe, for our friend Overman is always well posted. Our nurserymen should take a more effectual way of making these facts known. The nursery of F. R. Phenix is well known throughout the Union, and an immense demand is made upon it annually, and the new grounds of the Messrs. O. V. Briann are becoming prominent. Dr. Shroder is making a mania among vine growers, but of the others we know little or nothing. Had we their names we would add them to our list of nurseries.

WHERE AND HOW THE PEANUT GROWS.—The peanut is cultivated in Georgia, Alabama, North Carolina, etc. It is planted in ridges about three feet apart, and the vine stands about a foot in perpendicular height. The stem shoots out in all directions from it for about fifteen inches around. These runners have joints about an inch and a half apart, and at each joint a strong root strikes down into the ground about two inches deep, at the end of this root the peapod is formed and comes to maturity. Some farmers cover these lateral vines with earth, while others leave them bare all the time. It is not agreed which is the better mode. When ripe, one branch of the vines will have one or two quarts of peas. One acre will produce thirty to forty bushels of peas.—*Ex.*

Peanuts can be grown in abundance on the prairie. Covering the vines at the time of plowing is doubtless the best in this latitude. It will not be long before they will be common in all our gardens, as their culture is already attracting considerable attention in many neighborhoods.


Ed.

LIQUID GLUE.—The following receipt, the discovery of a French chemist, is selling about the country as a secret, from one to five dollars. It is a handy production, as it does not gelatinize nor undergo putrefaction and fermentation and become offensive, and can be used cold for all the ordinary purposes of glue in making or mending furniture, books, or broken vessels that are not water, &c.

In a wide-mouthed bottle dissolve 8 oz. of best glue in half a pint of water, by setting it in a vessel of water and heating it until dissolved. Then add slowly, constantly stirring, two and a half ounces of strong aqua fortis (nitric acid). Keep it well corked, and it will be ready for use.

A Child's First Impression of a Star.

She had been told that God made all the stars
That twinkled up in heaven, and now she stood
Watching the coming of the twilight on,
As if it were a new and perfect world,
And this were its first eve. She stood alone
By the low window, with the saken lash
Of her soft eye upraised, and her sweet mouth
Half parted with the new and strange delight
Of beauty that she could not comprehend,
And had not seen before. The purple folds,
Of the low sunset clouds, and the blue sky
That look'd so still and delicate above
Filled her young heart with gladness, and the eve
Stole on with its deep shadow, and she still
Stood looking at the west with that half smile,
As if a pleasant thought were at her heart.
Presently, in the edge of the last tint
Of sunset, where the blue was melted in
To the faint golden mellowness, a star
Shook suddenly. A laugh of wild delight
Burst from her lips, and, putting up her hands,
Her simple thought broke forth expressively—
"Father! dear father! God has made a star!"

 The annual meeting of the Fruit Growers' Society of Western New York, will commence at the Court House, in Rochester, on Tuesday, Oct. 1, at 11 o'clock, a. m.

From Benjamin D. Walsh.

ED. FARMER—*Dear Sir:* I have been reading with much interest Mr. Cyrus Thomas' article on the Army worm in your September number. I do not propose to reargue the points in dispute between him and me—for I have already inflicted upon the Agricultural world a most outrageously long talk upon this subject in the transactions of the State Society—but I do propose now to correct two very serious misstatements which friend Thomas has made therein relative to your humble servant.

First—he says (p. 271) that my opinion is “that the normal habit of the Army worm pupa is to remain in that state until the following spring, although some few exceptional cases hatch during the summer.”

Now I have never entertained nor expressed any such opinion; and my firm belief is the exact contrary, viz: that the normal habit of the pupa is to hatch out 15 or 20 days after it goes into that state; but that it may POSSIBLY be the case that some few remain in the pupa state till the next fall or spring. So much for that point.

But I have a more serious crow than that to pick with Mr. Thomas. I am neither a dentist, nor a dealer in Parrs' life pills, nor even an obstetrical practitioner; and therefore I have no business to be dubbed Doctor. And yet throughout the article I am “Dr. Walsh.” I might just as well address my entomological brother as Rev. Cyrus Thomas.

The only handle to my name that I am entitled to claim is Mr.—seeing that I am a Master of Arts of an English university; and at these universities Mr. is a title far superior to Esquire; the under-graduates being all Esquires, and the full-graduates MISTERS.

It is true that during my recent sojourn in Egypt it was decided by an unanimous vote of the officers at Camp Douglas, that I should be appointed *Bugmaster-General of the State of Illinois*; and I was very commonly addressed there as GENERAL Walsh; but as, from some unaccountable oversight, the Governor of the State has not as yet made out my commission, I do not desire at present to claim the title.

BENJ. D. WALSH.

Chicago, Sept. 13, 1861.

Our friend Walsh is a bit of a wag as well as a bugologist and is disposed to take off brother Thomas for using unauthorized handles to his name. The title of Dr. has become so common and used for such varied purposes that we do not blame Mr. Walsh for being disgusted with it, and

we fear that General is destined to the same inglorious end. However in this case, as the appointment comes from such a high source, we are disposed to have our friend wear it, and henceforth we shall address him as General Walsh. The fact, that the Governor has not as yet made out the commission has nothing to do with it, for that must come from the Constitutional Convention, who will not only create the office of General of Bugs, but fix the pay and rations thereunto. We shall feel more secure in our pomological and cereal products so soon as the State orders Gen. Walsh into the field with his army of cannibal bugs to wage war on the whole tribe of leaf eaters, borers, and destroyers of our fruit. Should the Convention approve of the election at Camp Douglas we shall move the General to invite Capt. Thomas to his staff.

ED.

[From the Rural New Yorker.]

War and Agriculture.

EDS. RURAL NEW-YORKER:—Will you allow an old man, one who has lived during wars and rumors of wars, on both sides of the Atlantic, and witnessed their effect upon agriculture, to say a few words to my brother farmers in this time of alarm and excitement. Every one seems to be carried away with the excitement,—every one seems to take it for granted that war must necessarily bring hard times and embarrassment, and ruin, to all our commercial interests. Now, if we continue this course, want of confidence, and general embarrassment will assuredly follow. If we keep up this mad dog cry against our own prosperity, we shall of course suffer. The dog against which the cry is raised, though perfectly well, suffers just as much as though rabid. But is this necessary? Is this commercial ruin the necessary result of the war, or is it the result of our own unreasonable fear and alarm? It is the first time in the history of the world that I have known war to cause hard times. In Europe war is always considered the sure precursor of commercial activity and general prosperity, and particularly so to the farmer and those engaged in the work of producing. The English farmer, though he may moralize a little upon the evils of fighting, receives the declaration of war with a good deal of ill-concealed pleasure, knowing as he does that while many may suffer he will gain in wealth. Produce, manufactures, almost everything, advances in value, in fact puts on what is called “war prices,” money is circulated freely, every one is actively employed, and general prosperity is the order of the day. Even the commonest farm laborers feel the influence of the times in a few shillings extra per week.

The greatest draw-back to this prosperity is the fact that peace must follow war. Then, when everybody is trying to rejoice at the declaration of peace, the farmer, the merchant, and the mechanic, finds it difficult to conceal his fears. In a little while business becomes dull, farmers have

to dispose of their crops at lower rates, speculators who purchased at war prices have to sell at peace prices, and the result is, many failures and general stagnation. Farmers who became really or prospectively wealthy, and lived in a corresponding style, find it difficult to conform to their altered circumstances, and pay their debts, and in this work they often have to be aided by the sheriff. Only those who had the sagacity to look forward to the probability of peace, and take in sail, are able to weather the storm.

What is there about the present war to cause a different state of things than that which is found to be the common result of war? In the first place our Eastern cities lose their Southern trade, and a good deal of money owned by Southern creditors. This will affect business in these cities, and may perhaps more than counterbalance the extra activity which would be the natural result of war, but cannot, I think, bring upon the country any very great or general embarrassment. The farmers in some parts of the West usually send their produce down the Mississippi, to find a Southern market. The blockade has of course destroyed this market, and the result will be somewhat injurious to the farmers of that section. Bulky produce that will not pay for shipment East must be necessarily low, but cattle and all things that can find an Eastern market will bring remunerating prices.

These are the only things that suggest themselves to my mind that will in any measure tend to cause derangement of business, and in them I see no cause for the great outcry that is now being made. On the contrary, I think this will be a year of prosperity, equal to any which the farmers of America have enjoyed during the last twenty years. A million of dollars is being expended every day by the government, and this money is not sent abroad, but circulated among the people in payment for provision, clothing, &c. Its influence must be felt for good, throughout all the avenues of trade, and will jingle in the pocket of many a farmer who now has a long f.e.e, a heavy heart and an empty pocket. But, some say, we are ruining our country by the vast outlay of money now making by the government. Such statements have been made, too, in the English press, and Mr. Bright, of Manchester, in an address in which he treated of American affairs, showed that the expenses of the present year of war in America are less than the expenses of the British government in the year of peace. We, who have so often boasted of the strength and glory of our country, must acknowledge what we have said and sung to be only an idle boast, if we now consider that a year of expense, such as England endures every year, can bring our favored land to the verge of ruin.

I do not feel competent to treat of the war and its effects, morally, politically, or commercially, and only throw out these few hints for the benefit of my brother farmers, who are now very unnecessarily alarmed. One frightened man will frighten a crowd, and one cowardly or frightened regiment will cause confusion in an army.

OLD FARMER.

Monroe Co., N. Y., 1861.

Oregon Crops.

The prospect is—indeed it may be set down to be certain—that there will be a great deficiency in the crops of Oregon the present, as compared with the last year. This has grown out of two facts. There was a general belief in some quarters last fall, that the raising of wheat would not pay and no great effort was made to sow fall wheat; the winter and spring proved to be unfavorable for sowing, and much land intended for wheat, was not sown. The same general facts may be stated in relation to other crops. The result we believe will be that the crops of the country the present season will not amount to more than half as much in quantity as last year.

In the meantime, new and enlarged markets are opening for our wheat. The English market, doubtful last year, the present will receive all we can spare. The new market in Brazil, hitherto supplied by Maryland and Virginia, will furnish an extensive market for the Pacific coast. Our wheat is really better suited for the Brazilian market than the wheat of the Middle or North-western States. Besides these markets, others are opening at various points on the Pacific.

We endeavored to impress our readers last season with the present anticipated state of things. Oregon is a wheat country. If she will keep up her supplies of wheat, she will find good and constantly increasing purchasers. If it should be known that cargoes of wheat and flour could be had at this point we should have merchants and ships to carry it off. We never shall have markets until we have large and reliable surplus crops of wheat. That man who because he cannot make himself rich out of a chance crop of wheat, will stop its cultivation, will never get rich anywhere.—*Oregon Farmer.*

DURABILITY OF MULBERRY FOR FENCE POSTS.—Nine years ago, says a correspondent of the *Co. Gent.*, I spent a few weeks in Connecticut, and Capt. J. Peck, Greenwich, showed me a mulberry post which had been standing on one side of his barn yard for more than forty years. As I was visiting him in the month of June, in 1861, I inquired more particularly about that post, which is now standing in the same place. It was a green post, about eight inches square, when it was first set; and although it stood in a very unfavorable place to put its durability to a fair test—where manure was piled around it during more than half the year—still, it stood more than fifty years, before it rotted off near the surface of the ground. It has been re-set, as it was a tall one, and as it is now well seasoned, it will without doubt last sixty or seventy years longer.

Were mulberry posts thoroughly seasoned before they are set, and smeared with a good coat of coal tar near the surface of the ground, they would doubtless last one hundred years, or even more.

—**FOUND IT OUT.**—We have found out the difficulty in Kentucky. She is the "half horse, half aligator" State. The horse pulls North, the aligator pulls South, and one or the other must soon carry the State.

[From the Country Gentleman and Cultivator.]

Protecting Animals from Rain Storms.

I believe that farmers, generally, are not aware how much loss they sustain in the flesh of their domestic animals, and how much they suffer during cold storms of rain in the summer, or at any other season of the year. Warm showers never injure animals; indeed they appear to have a good relish for such a sprinkling as they frequently get, providing it is not as cold as ice. Most animals will endure pretty severe cold, as long as they can keep dry; but, as soon as their bodies have been wet, and are kept wet, evaporation commences. And as evaporation is a cooling process, the heat of their bodies is carried away very rapidly; and the sudden transition from heat to cold chills them in a very short time, and injures them more than a severe storm in winter.

Animals will endure a very sudden change from cold to heat, with impunity; but sudden changes from heat to cold are often attended with very injurious consequences. We are apt to think because it is summer, or not freezing weather, that a storm of rain will not hurt our animals. But, could they communicate to us their feelings during a storm of cold rain, there would not be so much negligence about protecting them, especially during the cold and stormy days and nights of autumn.

I well remember, that about twenty years ago, there was a severe rain storm in the month of June, and although our sheep had been sheared more than two weeks, we thought they ought to be brought home to the barn. But many of them were so cold and feeble, in consequence of the rain, that it was necessary to go after them with a wagon.

About the first of July, 1861, there was another very cold storm of rain, which swept away hundreds of sheep in the town where I reside. One farmer lost about sixty of his choicest sheep, although they had been sheared several days before the storm came on. I have heard of more than three hundred lost during the storm.

It is infinitely better for animals, to keep them in a stable or shed, where they cannot get a mouthful of food for twelve successive hours, than to allow them to be exposed for only two hours to a storm of cold rain.

When I was accustomed to keep sheep, I was always careful to let them have the benefit of a shed, if they needed it, not only in winter, but during summer; and it was very unusual that our horses and neat cattle were left for one hour in the field, during a cold storm. Cold storms not only make horses *look* bad, but they do really injure them, by rendering them stiff and dull; and they often contract severe cold, which, many times, will superinduce catarrh and glanders.

Young calves and colts often suffer extremely from exposure to cold storms, even in summer; and to shelter them, will be time and money well appropriated. "A merciful man regardeth the life of his beast."

S. E. T.

It is the spring and autumn storms that damage stock exposed to them, and not the dry, cold

weather of winter. For this reason we have always advocated the use of sheds. Keep your stock out of the wind and storms, and they will get along well enough without being stabled. In fact a good shed, with plenty of straw for bedding, is better than an ordinary stable. The dairymen about Chicago have learned that, to have a cow give a good mess of milk, they must be kept in a stable, with a temperature above anything like a severe frost, that the thermometer should not go below thirty degrees. So if we would keep our stock in good order through the winter, we must not allow them to be exposed to cold rain storms. Cattle will do well on straw, if well stacked, and they be allowed to run to it at pleasure; and in such case you will always find them on the lee side, and at night snugly bedded in the loose straw. We would prefer a good straw stack to an abundant supply of hay without the shelter.

Ed.

[From the Cincinnati Commercial.]

Linseed Crop.

Within the past week, the manufacturers of Linseed Oil in the West, held a meeting in this city for the purpose of comparing notes, with reference to their future action.

The statistics furnished, showed that the whole amount of seed given out to farmers, in the spring of 1860, was, in round numbers, 40,000 bushels; and that the average product was eight fold, or eight bushels to the one sown. This year the whole amount given out did not exceed 25,000 bushels, and further that there has been much less independent seed sown this year, than last. The cause of this falling off was the wet weather in April, which rendered sowing in all cases difficult, and in some cases, in flat land with a clay sub-soil, impossible. The growing crop, we understand, looks well, and promises an average yield, in case the weather proves favorable.

The whole number of oil mills in the West is sixteen, all of which we believe were represented.

Now, the product of oil is generally two gallons per bushel, so that basing our calculations upon the above figures, leaving out the deficiency in independent seed, the comparison is as follows:

1860, product of oil - - -	gallons 784,000
1861, " " - - -	400,000

Deficiency this year - - - \$384,000

Based upon this fact, thus made known, the manufacturers agreed not to sell their present stock of oil less than 55c, which is an advance of 4@5c per gallon over the rate it had been selling at.

—Though the clouds rear their battlements in the sky, they are easily carried by storm.

Remarks on Management—Transplanting and After Culture of Trees.

BY C. N. OVERMAN.

Twenty years' experience with trees, on prairie soil, has, we trust, made us acquainted with every condition they require, and every necessity that governs them in our peculiar soil and climate, from which we deduce the following plain and simple theory of treatment, assuring our customers that if they will strictly observe it in practice, they will have little cause to complain of the failure of their trees to grow.

In taking up trees, we are careful to preserve as much of the roots as may be needed. If shipped in the fall—which is far the better—as soon as received they should be unpacked, the roots examined, and those that are mangled should be cut off smooth from the lower side, and long, straggling ones shortened to six or eight inches.

Next dig a trench in dry ground, a foot deep, and long enough to contain your trees, with the bundles side by side. Take out one side of the trench, sloping upward from the bottom to the surface of the ground, and so far out as the length of your trees. Into this sloping trench place the trees, roots downward, fill in the fine soil among the roots, then cover the whole of the trees with dirt, root and branch, out of sight. So soon as the ground freezes two or three inches deep, place over the roots a coating of straw or hay, a foot deep or so. Cover this securely with dirt, and the frost will not penetrate to the roots. If straw is not used, two feet of earth, at least, must be put over the roots. This method is perfectly safe for all hardy trees and shrubs, except peach and evergreens. Burying up trees in this manner secures to them effectually the condition of profound rest they so much need in the winter season.

In early spring, or when freezing weather is over, the tops and trunks are to be carefully raised up out of the ground, leaving the roots well covered from the air. Let them remain in the trench till the buds burst, by which is indicated the proper time for planting in the spring. It is very important to dig the holes for all kinds of trees, *in the fall*, previous to planting.—They should be, for apple trees, three feet across and two feet deep, and the subsoil or clay cast aside. The action of the frost in pulverizing the soil of the border is highly beneficial.

When the time for planting arrives, fill the holes two-thirds full of fine, moist surface soil, and settle it down by treading. Take the trees from the winter quarters, a bundle at a time, dip the roots in a puddle, and proceed with the planting. Place the tree in its position, leaving its top a little to the southwest; spread the roots out, and press the moist soil on each one *firmly* with the hands. Next fill up to the surface with rich top soil, and tread it down above the roots. Let the tree stand but two or three inches deeper than it stood in the nursery. Finish the planting by making with the clay a mound around the tree, say three inches high, and grade it off to the edge of the border. Should the

weather be dry after planting, water once effectually, and cover the border with litter, two or three inches deep. If trees are set in the fall, a mulching of long manure, a few inches deep, should cover the border, but must be removed in the spring. The proper time for fall planting is from the middle of October till about the middle of November.

When large trees are planted, all the shoots of the previous season's growth must be shortened in by cutting back two-thirds of their length. Keep the ground around the trees loose and free from weeds; plant nothing within four feet from the trees.

Perhaps the best crop amongst trees the first season is corn, as it affords them a needful protection against the hot sun and the winds; but afterwards, some low, hoed crop is preferable. Do not, on any account, seed down a young orchard to small grain or grass of any kind. This *murderous* practice has been shamefully prevalent in our country. Wash the trees frequently with soap suds, through the first half of the growing season. This will greatly benefit the tree, and at the same time secure it from the attack of that worst of vandals, the borer. A stiff stake should be set on the southwest side of the tree, about a foot from it, and the tree securely fastened to the stake by a band of rye straw, hard twisted, and fastened to the stake by means of a willow or strong twine. Bank up around the trees a little before winter, and apply a coat of whitewash to the trunk and branches, but never at any other season.

The trimming must be very judiciously done, but as little of it as possible, only sufficient to give the tree a well balanced head, an open centre, and to take out cross branches. If this is done at the right season, and the tree properly trained while it is small, there will be no occasion to mangle it when it is old, by taking off large branches. Dislodge all injurious insects at once, and cherish a "holy horror" of all orchard depredators, whether of stock, gophers, rabbits, mice, insects, or "whipple-trees;" and trust to Providence for a rich reward of all your patient toil and care, in due course of time.

In the course of our observations with the FARM COMMITTEE, it will be seen that low heads are more desirable on several accounts, but there is so much of value in the above that we give it without further comment.


ED.

AN ILLINOIS FARM.—The largest farm in Illinois is that of Isaac Funk, who resides near Bloomington, M'Lean county. The total number of acres occupied and owned by him is 30,900—one farm of 27,000 acres, said to be worth \$30 per acre, and three pasture fields containing, respectively, 8,000, 3,000 and 1,000 acres. His great crop is corn, all of which he consumes at home, and is thus able to market about \$70,000 worth of cattle per year at New York. His stock on hand of horses, mules, hogs and fat cattle is said to be worth \$1,000,000.—[Chicago Post.

FRUITS.—Pears are scarce this season. The Louise Bonne de Jersey and a few other varieties are giving a good crop. The Doyenne d'Ete is just over, and the Bloodgood and Beurre Giffard are ripening. Several early varieties of apples are in season or just over, and none are equal in beauty and productiveness to the Red Astrachan. It is a little too acid for some tastes, but is a most excellent apple, always fair, beautiful and abundant. Of plums we have about none, and this is the first season in ten years that we could make this statement truthfully. The peach trees are slowly recovering from the effects of the unfavorable winter and spring. The leaves became curled in May and dropped off, and it was not until late in July that any considerable growth was made on young and vigorous trees, while old trees will not recover. Now a tolerable growth is being made, but we doubt whether it will be in suitable condition to endure another hard winter. If, therefore, the next winter should be severe, we may anticipate the entire destruction of many of the trees that have already suffered so severely. The apple crop will be light, and the early varieties are much injured by the curculio. The dwarf trees are bearing well, and there are few more beautiful objects in the garden than these miniature apple trees covered with fruit.

The small fruits, with the exception of currants, have borne well, and the New Rochelle blackberry we never saw finer. In many places, however, we see evidence of neglect. We make a hobby of a particular fruit for a few years, treat it well, get fine crops, and speak its praise. In a few years we begin to neglect it for some new hobby. This is the way we have treated strawberries. About the time Hovey's Seedling was first disseminated, all the amateur gardeners in this section engaged in strawberry culture, and specimens were grown and exhibited here that would not disgrace a London exhibition. Burr's New Pine followed, and magnificent dishes of this delicious strawberry were shown by the side of Hovey. Now, we think not half a dozen quarts of either are grown in the county, and very few beds are to be found even in tolerable condition. Such a course as this tends very much to retard the progress of fruit culture.—*Rural New Yorker*, Aug. 24.

The Louise Bonne de Jersey is one of the pears that appears to do well everywhere, always hardy and an abundant bearer. We suspect our Western New York friends are beginning to feel the effects of too large clearings, and will soon begin to talk of timber belts to protect their orchards. The paragraph above in regard to small fruits should be committed to memory by a large class of our people. Ed.

 Adam Bird, of Co. I, 16th Illinois regiment, who was in command of a scouting party, was killed Tuesday, near Agency Ford, about eight miles from St. Joseph.

Healthful Effects of the Tomato.

Tomato is one of the most healthful, as well as the most universally liked, of all vegetables—its healthful qualities do not depend upon the mode of preparation for the table; it may be eaten thrice a day, cold or hot, cooked or raw, alone or with salt or pepper, or vinegar, together, to a like advantage, and to the utmost that can be taken with an appetite. Its healthful quality arises from its slight acidity, in this making it as valuable, perhaps, as berries, cherries, currants, and similar articles. It is also highly nutritious, but its chief virtue consists in its tendency to keep the bowels free, owing to the seed which it contains, they acting as mechanical irritants to the inner coating of the bowels, causing them to throw out a larger amount of fluid matter than would otherwise have been done, to the effect of keeping the mucous surface lubricated, and securing a greater solubility of the intestinal contents, precisely on the principle that figs and white mustard seeds are so frequently efficient in removing constipation in certain forms of disease. The tomato season ends with the frost. If the vines are pulled up before the frost comes and hang up in a well ventilated cellar, with the tomatoes hanging to them, the "love apple" will continue ripening until Christmas. The cellar should not be too dry nor too warm. The knowledge of this may be improved to great practical advantage for the benefit of many who are invalids, and who are fond of the tomato.

Work Bulls.

All bulls might be made to do work enough to pay the expense of keeping them, and they would in every respect be the better for it. If they have any disposition to be turbulent, nothing will more effectually "take the conceit" out of them, and render them safe and manageable, than constant labor. Mr. E. R. Andrews of West Roxbury, owns the imported Ayrshire bull Albert, and for some time past has worked him almost daily. A yoke was made for him, and by means of a saddle and breeching, he is harnessed in the thills of a wagon or cart, and hauls any load of suitable weight for a horse. Indeed the men who have him in charge, state that he can pull more than any horse on the farm. They take him to the field, and carry from thence to the barn, at one or more of grain or hay at once. He is very tractable and easily managed, but is quick in his action, generally walking faster than a horse commonly does. He has been used considerably in hauling manure out of the barn-cellar, and there being considerable of a rise in the ground, he has been shod to assist him in getting a foothold, and to keep him from getting foot sore. We were assured that he often takes a heavier load up this rise than two stout horses could. He is said to be "baudy" anywhere. A man saddles him as he would a horse; gets on his back, and by lines attached to the ring in his nose, guides him, and "takes the road" at a smart pace. In fact he is made "generally useful" about the premises.—*Boston Cultivator*.

A Grain Binder.

The editor of the Iroquois (Ills.) *Republican*, says that Mr. D. W. Ayres of that place has been for some years working on a model for a grain binder, and at one time completed and filed a caveat for a machine that would bind with the straw of grain, but after consideration concluded that it was too complicated for general use, and so abandoned it. Having heard of the wire and string binders, he set himself about learning their qualifications. The string binder he found would not prove valuable for the reason that no machinery could be made to tie a knot, and the sheaves had to be made all one size to suit the length of the strings, which are made one uniform length with a knot at each end, else the sheaves would be imperfectly bound or not bound at all. The wire binder, Mr. A. feared would be too expensive, but on ascertaining that wire could be furnished at a cost not exceeding eighteen or twenty cents to the acre, he went to work to perfect a wire binding machine, capable of being attached to any ordinary reaper, and of binding to its full cutting capacity—that would fill all the requirements of a successful self-binder.

In this machine the simple movement of getting the wire around the bundle, does all the rest. The wire is carried around the bundle by a revolving arm attached to a crank, which presses the bundle together and operates the cutting and twisting device—one turn of the revolving arm completely binding a bundle.

Its capacity when attached to a reaper, will be fully equal to the cutting capacity of the reaper, and will bind a large or small bundle equally well. As the grain is raked from the board on which it falls directly into the binder, it of course does not touch the ground until it is bound into a sheaf, and the ground over which the machine passed at the trial was almost as clear of straw as if none had ever grown there.—*Field Notes.*

We have little faith in the practicability of these binders. Even the self-rakers have not become fully established. If grain could be grown of a uniform size of straw, so that in passing over a given space the bundles would be of the same size we might have more hope of success, but as it is the prospect is not very promising.

ED.

GREAT WESTERN R. R.—The *Toledo Blade* says: We are informed that so great is the quantity of produce on the line of the Great Western Railroad of Illinois, that the road has no means within its reach, of relieving the pressure. The Wabash Railway, its eastern connection, is taxed to the utmost with its own business, and is unable to furnish cars to aid in moving the vast amount of freight seeking this point by way of the Great Western road. As evidence of the extent of this pressure, it is stated that the loss to the latter road has been at least \$20,000 during the past two months.

POISONOUS PROPERTIES OF BRINE.—It may not be known to all that brine, in which meat or fish have been salted, is poisonous to domestic animals. If left in their way they will partake as freely of it as they will of pure salt, when it very often proves fatal. The *L' Union Medicate*, a French publication, gives an account of the researches of M. Reynal in regard to the poisonous properties of brine. From a series of experiments detailed, he draws the following conclusions:

First, That three or four months after its preparation it acquires poisonous properties.

Second, That the mean poisonous dose for a horse is about four pints; for the hog, one pint; and for a dog, four to five gallons.

Third, That in less doses it produces vomiting in the dog and hog.

Fourth, that the employment of this substance mixed with the food, continued for a certain time, even in small quantities, may be fatal.

We know from experience, says the *Valley Farmer*, that brine, if swallowed by hogs and other animals, will prove fatal yet we doubt if the subject is susceptible of the definite results as stated by M. Reynal. for the degree of the poisonous properties of the brine depends on various circumstances. We have known a much less quantity to prove fatal than that stated above.

THE GOLDEN VS. THE OSIER BASKET WILLOW.—D. L. Halsey, of Victory, Cayuga county, N. Y., under date of 8th August, writes to the *Country Gent* on this subject as follows: "I have noticed several newspaper articles recommending the Yellow Willow for hedges. My object in this communication is to prevent the farmers of this country from injury, by explaining the terms used in said articles. The variety of willow called invariably by foreigners Yellow Willow, is the 'Osier Basket Willow' and the willow which is called Yellow Willow in this country, is there called the 'Golden Willow.' The Golden Willow of Europe, called Yellow Willow here, is utterly unfit for fencing, for the reason that cattle will eat the tender sprouts as readily as they will clover—so of the Napoleon or Weeping Willow, and their twigs are useless. The Osier or Basket Willow is of a light green color during the summer, but upon the ripening of the wood the bark becomes yellow; it is not eaten by cattle or sheep, and the twigs cut from the hedges if not wanted for home use for baskets, sell readily in the New York market at five to seven cents per pound. I have now in various stages of growth over one hundred rods of Osier Willow Hedge; that part three years old is proof against cattle, pigs, ducks, geese, chickens, high winds, floods, deep snows, and the only fence on my farm that produces a cash income yearly greater than its first cost."

—A good many men are in the best health when they are out of spirits,

The Currency.

This subject is of no small importance to the farmer, and one in which he should be well posted, for he has lost enough with wild cat shimplasters to quicken his ideas.

If the farmer will not take wild cat for his produce, the game is up at once. It is, therefore, his own fault if the system again gets a foothold. We copy below some sensible remarks from Wells' Commercial Express, one of the best informed papers of Chicago:

The great financial question of this city, and of the northwest at the present moment, is substantially this: Will the people consent to put out of their hands the fair supply of specie, and notes of well managed banks in States enforcing a system, and accept in their place the issues of Illinois banks endeavoring to re organize or regalanize themselves under the amended bank law. Last winter, such a movement on the part of Illinois banks and bankers would have been most heartily seconded and supported by the community, but now it is too late. The people find that they can do without wild cats, and they will do without them. They will not trust again to men whose obligations have been pompously repudiated, or cunningly compromised at 20 and 60 per cent. discount, and may be again in less than six months. It is all useless for the venal editors of some of the papers to proclaim that these debauched bankers and decaying corporations are as good as the substantial men and sound systems that have been tried in the hottest furnaces without the smell of fire near their garments, for the common sense of the people is only insulted by such assertions. Let the business men, the farmers, and the mechanics of Illinois, the workers in the community, persistently refuse to have anything to do with paper money issued under a rotten bank system by men who take every legal opportunity, and some that are illegal, to avoid their obligations.

We want the best banking system for Illinois and Chicago that the wisdom of the age has produced or can produce, and until we can procure such a one, let us endure the present small ills we have, rather than fly to others we know not of; do not let us jump out of the frying pan into the fire, having but just crawled out of that uncomfortable element. We want a banking system which shall embrace like the following, suggested by one of the best financiers of the country, but if we begin to handle Illinois currency in its present shape, we shall have nothing better until we pass again through a sweeping financial revolution more desolating than the last. The following outlines of what we require, commend themselves to universal approval:

1st. Establish a system of redemption at the commercial centre, such as work so well through the Suffolk Bank of Boston, and the Metropolitan of New York. This only can give uniformity of value, prevent forced circulation, and secure the requisite drainage.

2. Require weekly, or at least monthly state-

ments to be published. These are fatal to shams and frauds, enlighten, and so protect the public and keep the banks under the best of laws, a well informed public opinion.

The "weekly statements" of the New York city banks, enlightening their managers and the public, have raised their average stock of specie from about ten or eleven millions, to over twenty millions.

3d. Allow only those bonds which have the most unchangeable market value to be taken as security for "circulation."

4th. Let the redeeming banks at Chicago be the depository of coin for all the banks of circulation under the supervision of the Bank Commissioners.

5th. Let certificates of deposits of coin in the redeeming bank be taken and held by the Bank Commissioners as security for the circulating notes in addition to the notes which are issued to the banks on the pledge of stocks or bonds.

An Act for the Protection of Growing Fruit.

Be it enacted by the people of the State of Illinois represented in the General Assembly. SEC 1. That if any person or persons shall hereafter enter the inclosure of any person without leave or license of such owner, and pick, destroy, or carry away the fruit of any apple, pear, peach, plum or other fruit tree or bush, such person or persons shall be deemed guilty of a misdemeanor, and upon conviction thereof, may be fined in any sum not less than ten dollars nor more than fifty dollars, and may be imprisoned in the county jail for any period of time not exceeding twenty days. The penalties incurred by a violation of this act, may be enforced by indictment by any court having competent jurisdiction of misdemeanors in the county where the offense is committed, or the fine may be recovered in an action of debt, before any justice of the peace of said county.

Approved Feb. 22, 1861.

We publish the above by request, for the benefit of a class of mischievous boys and loose governing parents, who seem to think it a good joke to rob and destroy orchards, melon patches, &c. We are not so puritanical as to think it a heinous crime for a boy to enter an orchard when passing, and take what fruit he wants to eat, yet we believe the stringent clauses of the above act are fully justified by the malicious marauding expeditions which are frequently led against valuable orchards in this section. Never steal fruit, boys, unless you have asked the owner for it, and he, having abundance of plenty, has refused to give you a single apple. A clever man will give you fruit when he has plenty, and both clever and mean men ought to prosecute you if you steal.—*Mattoon Grzette.*

—The man who took a bold stand, resolved to bring it back.

Flax Cotton.

A meeting of the citizens of Lockport, N. Y., has been held to organize a company for the manufacture of flax cotton. It was attended by Ex-Governor Hunt and Hon. S. B. Ruggles, the latter of whom, says the *Lockport Journal*, "made some interesting statements of the merits of the invention, the simplicity and certainty of the scientific principle upon which it is based, and its great value at the present crisis, in cheaply extracting from flax a fibre capable of being substituted for cotton, at least to a considerable extent. The company who controlled this most important invention had the whole United States for their field of action, but after careful inquiry, had selected Lockport for their first and principal establishment, as enjoying convenient access at once to the productive flax regions of the interior, and to the centres of manufacturing industry on the sea board; possessing, too, in its own great hydraulic power, the means of manufacturing the fibres to any desired amount.

"He dwelt earnestly on the importance of developing this new branch of industry, not only in increasing the trade and revenue of our canals, and opening new sources of agricultural wealth but its far higher influence in securing to the Northern States and to Europe, comparative independence from 'cotton domination,' with which the world has been threatened.

"Among the statistical views which he presented was the fact that the price of the flax fibre thus produced and ready for use, would fall far short of the present price of cotton, probably not exceeding eight, and certainly not exceeding ten cents per pound."

No one of the speakers stated the process by which the fibre is to be prepared, nor do we learn whether it is new or one of the half dozen patents that have been for a year or more before the public. The matter is one of considerable moment to the people of this city, because whatever the method of manufacture, the raw material must be drawn from the West; and this should be the point in which it is prepared for the spinners. As our readers know, we have great faith in the ultimate success of flax as a cheap rival of King Cotton. Hence, we are anxious that Chicago should be among the first to avail itself of the inducements to capital and enterprise which the success of experiments already made, clearly hold out. The subject is worthy of an inquiry; and any gentleman of this city who has an intelligent friend in Lockport, would do well to get the information which the *Journal* fails to supply.—*Chicago Tribune*.

With the present and prospective high price of cotton, we see no reason why the culture and manufacture of flax should not be stimulated to a large extent. Even with due rotting and the ordinary breaking machines, it should pay good wages, and should the price of corn continue as at present, our farmers will enter upon its culture extensively, if for nothing more than the seed. Before the next feeding season, we hope

the successful manufacture of flax will be promulgated in the West. Our prairies are well adapted to its culture, and they could soon supply the eastern mills with an abundance of the raw staple. Ed.

Great Western Railroad.

For some months past, the connections of this with the I. C. R. R. have been so much out of joint that most of the travel East has gone by the way of Chicago—the extra carriage hire to Tolono, ten miles, has been too much for it. Since the regular running of the morning train to Mattoon, this difficulty has been in part overcome, and passengers on that train can make rather close connections either way on the G. W. R. R. In coming from either east or west on the day train, the connection north is quite satisfactory. It is to be regretted that all trains on these two roads could not make a closer connection at Tolono, as it is a very important point. A large amount of travel from Chicago and points north, that used to reach Springfield by this route, now go over other roads. The good order in which these two roads are always maintained, make them favorites at all times when connections are reasonably close. Since the completion of the bridge across the Illinois at Meredosia, this road has become one of the great through line, from the Mississippi eastward, and of vast importance to Central Illinois. Commencing at Quincy on the Mississippi, where it connects with the Hannibal & St. Joseph Railroad, it traverses directly through the heart of the great corn zone of the State, and connects at Toledo with the lake and railroad lines to the east, thus putting this part of the State in direct communication with the east and the west. The amount of corn, wheat, hogs, cattle and horses that find an outlet over this route is immense. Add to this that it has of late become one of the favorite routes to Kansas.

Our readers will consult the time card for late changes of time.—*Union, Champaign*.

TRIAL OF SCALES.—We have seen a statement of the recent official trial in one of the principal counties in this State, of twenty-five grain and stock scales. They were the ordinary out door wagon scales, and were tested just as they were found in common use, thus making it one of the best possible practical tests. Sixteen of them were of Fairbank's make, and nine of various other kinds, including some which have lately been claimed as superior to Fairbanks'. The result showed a remarkable degree of accuracy in those of Fairbanks' make, while all others were condemned as not sufficiently accurate for use. The importance of this fact will be appreciated without comment. We publish it because it is one in which the public are interested.—*Chicago Tribune*.

—A little wrong done to another is a great wrong done to ourselves.

Salt and its Offices.

Some modern agricultural writers have doubted the necessity of giving animals salt. The following remarks as to the effect of salt upon health, by Prof. James F. Johnson, of Scotland, may be relished by those who still put salt in their own puddings, and allow their cattle a little now and then:

The wild buffalo frequents the salt licks of Northwestern America; the wild animals in the central parts of Southern Africa are a sure prey to the hunter, who conceals himself behind a salt spring; and our domestic cattle run peacefully to the hand that offers them a taste of this delicious luxury. From time immemorial it has been known that, without salt man would miserably perish; and among horrible punishments, entailing certain death, that of feeding culprits on saltless food engenders; but no ancient or unchemical modern could explain how much suffering arose. Now we know why the animal craves salt; why it suffers discomfort, and why ultimately falls into disease if salt is for a time withheld. Upwards of half the saline matter of the blood (57 per cent.) consists of common salt, and as this is partly discharged every day through the skin and the kidneys, the necessities of continued supplies of it to the healthy body becomes sufficiently obvious. The bile also contains soda as a special and indispensable constituent, and so do all the cartilages of the body. Stint the supply of salt, therefore, and neither will the bile be able properly to assist the digestion, nor the cartilages to be built up again as fast as they naturally waste.

THE POOR AND THE COMING WINTER.—In view of the near approach of winter, and the scarcity of employment, one of our exchanges gives the following advice:

Let every man, woman and child save now; let them even pinch themselves and families now to prepare for darker times ahead. The winter is rapidly advancing, when the want of warm clothing, comfortable fires, unbroken shoes, and a host of other necessities, will be severely felt, if unprovided for now. Every shilling now squandered in dissipation or unnecessarily wasted, robs your family of some comfort. Every hour of idleness, when work may be obtained is a crime. Look to it, men with wives and little ones, that when the hour of gloom and distress shall arrive, you shall have saved, even though it be but a few dollars, for that time of need. He who neglects this plain duty is worse than unwise—he is wicked.

—The following is a copy of a will left by a man who chose to be his own lawyer: "This is the last will and testament of me, John Thomas, I give all my things to my relations, to be divided among them the best way then can. N. B. —If anybody kicks up a row, or makes any fuss, he isn't to have anything. Signed by me, John Thomas."

THE FRUIT CROP.—The supply of peaches this season is remarkably small; nearly all we have come from Delaware. The price yesterday was about \$1 12½ a basket, which is an indefinite measure, supposed to be barely five-eighths of a bushel, which would make the price \$1 80 a bushel. This is less than half the price of last year, and shows that people are not disposed to indulge in luxuries so freely now as then. We are assured that the peach season will be a very short one. We talked with an old peach-grower yesterday, from Monmouth county, N. J., and he assured us that county could do nothing this year to prolong the season, and we are sure that the north part of that State will not help the matter any. Last year we had a large quantity of peaches from Central New York. We shall have none from there this year, and in fact do not know of any place that will furnish any after the Delaware crop is exhausted.

Apples and pears in the drouth-afflicted region are shrivelled, and falling from the trees in such numbers that the crop will be materially affected.

Blackberries have proved quite a failure. The New Rochelle variety are generally about equal in size to the old fashioned sort, in a good season, while the latter are not worth picking—in many places, vines and fruit have both dried up. Raspberries too have proved an equal failure, and a friend from the Whortleberry region told us yesterday that the fruit was drying upon the bushes before getting ripe.

If there is any fruit outside of the drouth-afflicted region around this city, we advise those who have it to send it hither —*N. Y. Tribune.*

THE FARMER'S WIFE.—Is there any position a mother can covet for her daughter more glorious than to be the wife of an honest, independent farmer in a country like this? To be the wife of one who is looked up to by his neighbors as one whose example may be safely followed—one whose farm is noted far and near as a model of perfection of cultivation. To be the mistress of a mansion all her own that she may be the envy of every passer by because it is neat and comfortable, a sweet lovely cottage at home. To be the angel that flirts through the garden bidding flowers bloom, and twinning roses and honey suckles around the bed room, or sweetening their fragrance with her sweetest smiles, or spreading the snowy cloth beneath the old oak at the door to welcome her husband as he returns from toil, or even tripping the cradle with her foot as she piles the dishes with her hand or busily moves the needle, at the same time humming a joyous song of praise that she is a happy and fondly beloved wife of an American farmer—one of the true noblemen of this country—one that should by right rank as the pride and glory of America. —*Exchange.*

CORN PUDDING.—One dozen ears of corn, cut or grated, half a dozen eggs, one pint of milk, quarter pound of butter, with pepper and salt to suit, bake half an hour. —*Field Notes.*

THE ILLINOIS FARMER.

BAILHACHE & BAKER.....PUBLISHERS.

M. L. DUNLAP, EDITOR.

SPRINGFIELD, OCTOBER, 1861.

Editor's Table.

The space occupied with the unofficial look with the FARM COMMITTEE, in this and the two preceding numbers, we hope will well repay perusal. They contain many valuable facts, hints and suggestions, that will prove important for a long time. It is a pretty fair reflex of the condition of agriculture and fruit-growing throughout the State. The awards will be given at an early day—possibly in this number. The most of the copy for this number was prepared in August, so as to permit the editor to attend the State Fair, notes of which will be sent direct from the grounds, to fill up the number.

TOP DRESS YOUR MEADOWS.—If you want a good heavy crop of hay next season, go at it at once, and top dress your meadows. Use well rotted manure, if you have it, if not, take the best you have, if it is nothing but straw. Mr. Minkler has found muck from the pond equally valuable with the best of manure for top dressing of his clover meadows, and no doubt it will prove valuable on the timothy as well. Mr. Peck, of Winetka, composts his muck with manure for his lawn, with good results. We would like to see it tried directly, on account of the great saving of labor. We have faith in it.

PEACH TREES.—In a private letter, Mr. Pullen writes us that he is offering his peach trees at ten cents each, \$5 per hundred, and \$50 per thousand. Mr. P. is one of our most reliable nurserymen, and those ordering from him may feel assured that he will deal justly with them.

THE LONG WOOLS, vs. THE SHORT FINE WOOLS.—We would call especial attention to the article on this subject, on page 245, as containing much of value to the Western wool-grower. We had the pleasure of meeting Mr. Caird, when on his visit to the West, a few years since, and found him a straight forward, practical man. The *Country Gentleman*, from which we copied the report, as will be seen, freely endorses the same view.

A MULE WITH A COLT.—The San Jose *Mercury* says: A mule passed through this city on Sunday morning last, with a foal by her side, which from unquestionable evidence, is the actual, legitimate, bona fide progeny of said mule. She was in company with a drove of cattle from the lower country, belonging to Major Hensley. One or two instances of the kind are on record, but they are very rare. Henry Clay, we believe, owned a mule that brought forth a colt. Another case occurred in Texas, some years ago.

Simeon Francis, the father of the *State Journal*, of this city, has been appointed Paymaster in the United States Army, vice Smith, dismissed, Pacific Coast. The President has not forgotten the editorial corps, and may they never be forgotten.—*Ex.*

Our readers will be pleased to hear of the good fortune of the Ex-Editor of the ILLINOIS FARMER. For the past year he has been engaged in editing the *Oregon Farmer*. We hope he will have a good time, as all agricultural editors ought to be blessed with.

SILVER LEAF MAPLE SEEDLING.—The entire crop of the seed of this tree was destroyed by frost, in May last. So says a letter from an esteemed correspondent. Mr. Pullen, of New Jersey, will have a few thousand small sized, two-year old trees for sale this fall. Those intending to plant, will secure them without delay.

NEW ROCHELLE BLACKBERRY.—To have this berry in perfection, it must be left on the bush until it is fully rounded, intensely black, and drops from the stalk by a touch; it will then be sweet and juicy. If taken earlier, even when black, the berries will be hard and sour. The *Homestead* says, that unlike common blackberries, which are red when they are green, these continue green after they become black.

BERRY TRADE.—Roberts & Leland shipped, last week, eighty bushels of berries, principally whortleberries.—*Green Lake (Wis.) Spectator.*

Rain.

When, breathing balm o'er flock and fold,
Low winds bring sweetness from the South,
When still the winter touched and old
October biteth in the mouth—
I stand beside my cottage door,
And see above me and before,
Across the skies and o'er the plain,
The shadows of the rain.

I watched them blow from hill to hill,
O'er lonely streams and windy downs,
From throe to throe, from vill to vill,
And over solitary towns
Like stragglers from the skirts of night,
Slow squadron by a wind of light,
Torn down to music as they roll,
Sobbing as with a soul.

Across the skies and o'er the plain,
Below the silence of the spheres,
The hidden Angel of the Rain
Is sighing with a sense of tears;
And listening to the voice it seems
Some fancy muffled up in dreams,
Some shapeless thought our visions keep,
Moaning through shades of sleep.

I hear the voice and cannot doubt
The wisdom of the thought I win—
That all the changeable world without
Must type the changeable world within;
Nor may the poet fail to gain
One hint of kindred with the rain
Type of a life whose hopes and fears
Are rainbowed out from tears.

For, standing now between the shower
And sun, I glory to behold
The rainbow leave her cloudy bower,
Transfigured in a mist of gold;
Her trembling train of clouds retreat,
The Earth yearns up to kiss her feet—
She wears the many hued and gay
Robe of the unborn May.

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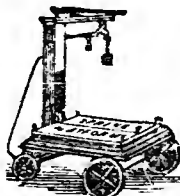
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THE SWEET POTATO CULTURIST, giving full directions for Sprouting, Planting, Cultivating, and Keeping, will be furnished gratis to Agents and Customers: and to others by mail, post paid, for twenty-five cents in stamps. Address,

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AGENTS.—We do not appoint any agents; all are voluntary. Any person so disposed, can act as agent in any place.

ENLARGE YOUR CLUB.—Will not the friends of the ILLINOIS FARMER inquire how many copies of the FARMER are taken at their respective offices, and pass around among those who ought to have their names added to the list? Our terms are so low to clubs of ten and twenty that we ought to have one or the other made up at every office in the State, and at every office in Central Illinois, one of twenty or more. Will our friends, and the friends of practical agriculture see to it, and thus lay us under renewed obligations?

TO SINGLE SUBSCRIBERS.—You receive the only copy of the FARMER that goes to your post office. Can you not send one, two, three or more new subscribers, without any trouble? Try. Sample numbers, &c., sent free.

DRAFTS.—Those remitting us large amounts of money, will please send us drafts on Springfield or Chicago, less the exchange. If you send cash in a letter, be sure that is well sealed and well directed, to Bailhache & Baker, Springfield, Illinois.

THE FARMER AS A PRESENT.—Any of our subscribers who wish to make a present of the ILLINOIS FARMER for 1861, can have it at the lowest club rates, when sent out of the State. For fifty cents you can treat your eastern friends to a western agricultural paper. In no way can you invest that amount to so good advantage to emigration.


SEND NOW.—Any person who remits pay for a club of ten or fifteen, or any other number at the specified rates for such clubs, can afterwards add to the clubs, and take advantage of the reduction. Thus a person sending us five subscribers and three dollars, can afterwards send us three dollars more and receive six copies.


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may send east for their paper which, though valuable there, is much less so here, the difference of soil and climate putting them out of their reckoning when attempting to teach us western farming.

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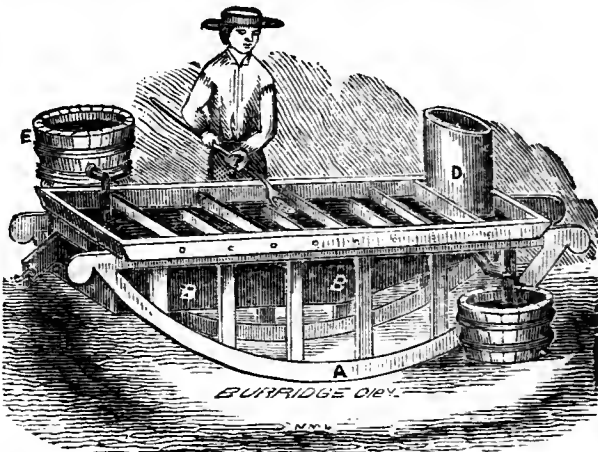
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 No. 3.—Cut 12 inches, right and left hand, single and double shin, wrought and cast standard.
 No. 4.—Cut 14 inches, right and left hand, single and double shin, wrought and cast standard.
 No. 5.—Cut 16 inches, right and left hand, single and double shin, wrought and cast standard.
 No. 3.—Clipper plow, right and left hand, single and double shin, wrought and cast standard.
 No. 4.—Clipper plow, right and left hand, single and double shin, wrought and cast standard.
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 Breaking plows—Cut 12, 14, 16, 18, 20, 22 and 24 inches mould board and red, right and left hand, cast and wrought standard with truss, 14 inch gauge wheels, rolling or standing cutter, with or without extra shares as desired.
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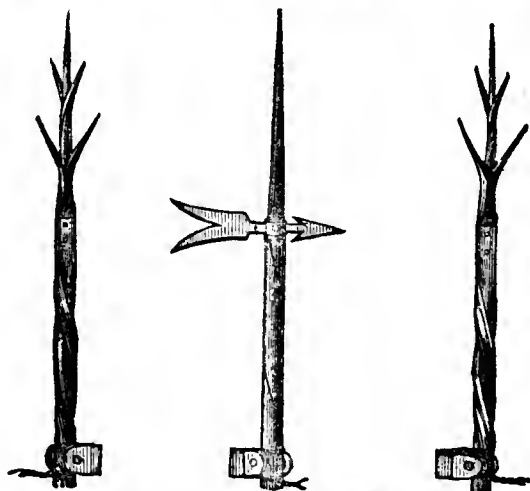
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BY BAILHACHE & BAKER,

AND IS

EDITED BY M. L. DUNLAP,

(THE "RURAL" OF THE CHICAGO TRIBUNE.)

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It is not necessary that the club should all be at one office—we send wherever the members of the club may reside.

The postage on the FARMER is only three cents a year in the State of Illinois, and six cents out of it.

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All business letters are to be directed to the publishers, Springfield.

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For orchard houses.

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THE ILLINOIS FARMER.

VOL. VI.

SPRINGFIELD, NOVEMBER 1861.

NO. 11.

November.

Another month, and the year 1861 will have passed off the stage. As we write, the year to the farmer is passing smoothly on—from the distance comes the faint notes of the slogan—the sound of the deadly rifle, and the occasional booming of the distant cannon. On the farm, the only music is that of the busy thresher, or the steady grinding of the sorghum mill, as it presses out the saccharine fluid, adding another to the great farm staples of the Northwest. As we ride down the pleasant slopes of summer into the valley of autumn, we can with a greater certainty sum up the results of the year, a year pregnant with the fate of the great valley of the teeming West, may the fearful and portentous cloud that now darkens our horizon, pass off and leave us but the gleaming sunshine that so lately sent its bright cintilations across our pathway.

The heavy rains of the last of August and first of September have been highly beneficial to the corn crop, and the young wheat is making a most satisfactory growth, while the potato crop has recovered to a reasonable extent, but not enough to make amends for the limited breadth planted. Late garden vegetables are also good, with the exception of sweet potatoes, which have made too large a growth of vines, without special regard to the tubers. The prices of wheat are satisfactory, while the prospects for corn are not good, though better than three months since. We look into the future of prices for farm products with renewed hope, and are busy harvesting the autumn crops with as much care as though

we were guarantied the prices of '55-'6, that filled the coffers of the farmer and induced all kinds of extravagance and folly. Should our anticipations prove true, we hope to be spared the extravagance. Time has brought wisdom, and the great mass of the farmers will hardly be caught so far cstray, or on so easy terms as before. Credit has become a victim of misplaced confidence, and has shrank into small dimensions, and of little power. Economy has become the order of the day—economy in labor. economy in expenses, and the wise will grow rich with economy, for they are no longer spending more than they earn. If farm products are cheap, we do not fool away the small sums on silks and finery; but put it to good account. Notwithstanding the hard times, the West grows richer and stronger year after year, the unrivalled fertility of her virgin soil outstrips all competition, and bids defiance.

No where else but in the West can wheat be grown for fifty cents, corn for twenty, and wool for twenty-five, and yet not impoverish the farmer. No where else can beef be had at three cents and pork at the same, without bringing ruin to the producer. The ease with which the great prairie slopes are cultivated, the certainty of the crop, all point to the fact that they are the very gardens of the world. The phantom, ague and lingering fevers have been dispelled by a more rational mode of living, and, to-day, the bills of mortality compare favorably with any part of the country. With such continued industry and economy, let come what will, the West will continue in her onward progress.

The State Fair.

The State Fair, held at Brighton, near Chicago, has, from several causes, proved a bitter disappointment. The city papers are now wise beyond the age in accounting for the failure. Some charge it to Mr. Gage, some to the President, Mr. Van Epps, and others to the Executive Committee.

From the day that Brighton was selected, we trembled for its success, and yet we dare not make such a prediction, for, with energy, good management, and fine weather, we hoped that all would go right, and it would have done so, had all things turned out as anticipated. George Gage is not to blame for offering the grounds, and, under the circumstances, few men would have accomplished as much as he has done. The President has worked faithfully and to the best of his ability to make the Fair a success. That there has been errors of judgment in many respects, no one will deny, but we have yet to see on the part of any person connected with it any marked dishonesty of purpose.

The selection of the grounds was unfortunate in many respects, and as the attempt to use them again for this purpose may be repeated, we will point out their defects. In the first place, the distance from the business part of the city, (six miles) is too great for the convenience of city exhibitors, who wish to use their own teams to haul goods to the grounds. Six miles out and return, is a round half a day's work, and too expensive to suit the views of those wishing to compete for the smaller premiums. The railroad facilities are all too inadequate, and from present appearances, are likely to be, had Col. Mason continued in charge of the road, a different result would have been reached. Mr. Hewett, the train master, did all in his power, was at his post early and late, but the rolling stock at his disposal was on a scale that reflects no credit upon the foresight of Mr. Robb.

Bridgeport and Brighton have no features

in their past history to attract large crowds of visitors from the city, especially when open cars and a shower of cinders from the locomotive are offered in addition.

By under draining and the planting of trees, these grounds could be made valuable, but as they are, the risk of a heavy rain is too great, in connection with the other drawbacks, to make them at present desirable.

We can trace the want of good fixtures and accommodations in a good degree to the croakers, who avered that the Fair was bound to be a failure; and so strongly was this impression made that all those who had the management, firmly believed that the exhibition and attendance would be on a limited scale. Had the roofs of the buildings been water proof, according to the contract, the show of staple and fancy goods would have been larger. But few persons, upon examination of the board roofs, would risk their valuables to the tender mercies of an autumn rain. Mr. Robb, of the C. A. & St. L. Road, could not be made to realize the fact that more than a corporal's guard would be in attendance, until Thursday, when eighteen thousand persons were in attendance. Thousands of these carried back to the city an account of the discomforts of the ride, to and from the grounds, and the next day, which should have increased the attendance, it fell off to twelve thousand. Had there been ample railroad facilities and ordinary weather, the State Fair, even at Brighton, would have been the most successful ever held in the United States. Never before was there such a bill of attractions offered, and never before have we had so large an exhibition of the products of the farm and the work-shops in the useful departments of labor. The more costly manufactures, liable to damage by the weather, were not on hand for the reasons above given. We put most of the blame on the want of good roofs, and to the railroad for the want of facilities to get to the Fair.

We think there are no grounds around the city that could have stood the heavy rains and maintained their popularity, even the old United States Fair Ground was a mud puddle but little better. The fact is, that the whole country was drenched and uncomfortable. In ordinary times, the grounds at Brighton would not have been so bad. With a small expense, these grounds can be made valuable. Our objection to them is, mainly the distance, want of facilities, the aroma from slaughter houses, etc., at Bridgeport.

To the officers is due much for their efforts to modify the disaster. and we must award them an untiring energy in standing up under the accumulated load of misfortunes. To President Van Epps we feel under many obligations for his unwearied attentions towards the members of the press. The continued good nature of our Secretary done much to put a sunshine on the mud and water that, like a sea, stretched far on either side. The Treasurer and his corps of assistants had always a pleasant word for the mud bedraggled visitors, and, on the whole, we doubt if a better set of men can be found who would have stood the wear and tear of the untoward elements and concurrent circumstances as did those of the State Society during the late memorable Fair. Instead of dealing in complaints, and getting up a general growl that would benefit no one, we are thankful that things were no worse, knowing, as we do, that some valuable lessons have been taught that will prove of no small value at the next and subsequent great industrial gatherings of the State Agricultural Society.

~~no~~ If you do good, forget it; if evil, remember and repent of it.

~~no~~ State's evidence—A wretch who is pardoned for being meaner than his comrades.

[For the Illinois Farmer.]

Fruit Culture in Northern Illinois.

BY A. S. COE, OF PORT BYRON.

[The FARM COMMITTEE was highly pleased with the orchard of Mr. Coe, but in regard to the premium awarded him it is not proper to speak at this time. Mr. C. had prepared a series of articles on fruit culture, which he was kind enough to hand us, and we cheerfully place them before our readers.—Ed.]

It is now something more than a quarter of a century since the pioneer built his first log cabin in Northern Illinois, and yet fruit sells at most extravagant prices.

Is the cause to be found in the soil? We unhesitatingly answer no. We think the fact that fruit grown in the region mentioned has never, so far as we know, failed to bear off the prize when exhibited in competition with that grown in the same latitude in other States, ought to settle the question in regard to the perfect adaptation of the soil to fruit raising. We do not hesitate to pronounce all naturally well drained soils, in Northern Illinois, as well adapted to fruit growing as any to be found in the Northern States.

The question that next demands our attention is the one in regard to climate. Here, it must be admitted, is one of the real causes why some kinds and varieties of fruit which we shall hereafter mention, cannot be successfully produced.

It is well known to those who have emigrated from nearly the same latitude east, that the summer and autumn months here are much warmer than there, while the winter months here are equally as cold, if not colder than east.

[This is the main point after all—this growing the tree in one zone, and practically wintering it in another. Had we the constant snow covering of the northern States, we would not feel this difference so seriously.]

We must, therefore, resort to some artificial mode to remedy the defect. Shelter of some kind must be had, whether by artificial belts, close planting, and low heads, or otherwise. A few varieties will stand almost any abuse by the change of weather, but not so of all. With protection, we can grow the most tender varieties, as instance the Baldwin in the border of Mr. Douglas and the sheltered ground of Prof. Turner. Scarcely a forest tree can brave our winters out

upon the open prairie, then why should we expect immunity for the more tender apple, pear or cherry.—Ed.]

The foregoing proposition is made patent to all who are acquainted with the productions of the two localities, without consulting thermometrical tables, from a consideration of the fact that the larger varieties of Indian corn will mature in Northern Illinois, while only the smaller varieties will mature in the Eastern States in the same latitude. The former requiring a greater degree of, and longer continued heat to mature them than the latter, not, as some erroneously suppose, a more generous soil. For, if we go south along the bank of the Mississippi, as we proceed the size of the corn increases, and that, too, on soils that migrated but a few centuries ago, from beneath more northern and less genial skies, in the shape of Mississippi mud.

Perhaps, twenty centuries ago, the same soil was so far north as to be bound in frost for eight months in the year, consequently, could not produce even the smallest variety of Indian corn known. In short, tropical skies only, without artificial aid, can produce tropical fruits, although a superior soil can be dispensed with in the productions of a given plant—a suitable temperature cannot. The same causes that produce a large growth of corn, also produce a large growth of wood in fruit trees, and whenever the growth is continued late in the season, as is the case when the months of August and September are moist and warm, followed by a rapid fall of temperature in the months of October and November, the result is generally disastrous to all of the tender varieties of fruit trees. It will be seen that unless there is a long season of moderately warm weather, after fruit trees have quit growing, the new wood will be unripe, not fitted to endure the intense cold that is usual here as early as the middle of November, unless they are of the most hardy kinds.

The summer of 1854, previous to the severe cold winter that destroyed so many fruit trees in Northern Illinois, was very hot and moist, the mercury varied from 96° to 98° above zero, at 1 o'clock P. M. in the shade, on the first four days of September, at which time most fruit trees were growing as rapidly as at any time during the season, the apple making shoots from three and a half to four feet in length, and the plum, in extraordinary cases, even eight feet.

When the first snow fell, late in October, much of the foliage of the apple was still on the trees,

and nearly as green as in mid summer—the young shoots almost as succulent as growing corn. The winter following was intensely cold, the mercury fell to 25° below zero in the early part of January, '55, a variation in four months and a half of 120° to 123° in temperature. We wish it understood that we do not attribute the destruction of fruit trees in the winters of 1854 and '55, alone to the intensity of the cold, but mainly to the large and late growth of the previous summer and autumn, without a sufficiently long season of suitable weather to ripen the new wood before cold weather set in. If the degree of cold was the only cause, then last winter ought to have been equally disastrous to fruit orchards, as the mercury fell to the same figure.

We have said this much in regard to the effects of our climate on fruit culture to show that if we wish to raise fruit, we must plant hardy kinds and varieties, for this is the only remedy, as the climate will not adapt itself to what we wish to grow, unless we wish to grow what is adapted to the climate.

Another cause of failure is found in the fact, that large importations of trees from the east have been made without respect to their adaptation to the climate of the west, and in consequence of the condition they were in when received, not more than one-half ever grew, and two-thirds of the remaining half were either unproductive varieties, or too tender for this climate.

[We think our friend over estimated the danger from the late growth of the season of 1854. It is true that the growth was late, and the first frosts of autumn killed the succulent shoots, but to the long continued cold of the winter, not its intensity, we apprehend, much of the mischief was chargeable.

The fall was open until late in December, when we had a sudden change, sending the thermometer down to 20° to 25° below zero, and for three months the cold was intense, without the usual warm spell known as the January thaw. At the same time the ground itself was well protected by snow, but the wind was unusually severe, yet trees protected from the sharp wind by belts of trees or buildings, escaped, while those were destroyed exposed to the glare of the sun in the afternoon, thawing out the sap to be frozen solid again.—Ed.]

ASPECT, VARIETIES AND SOIL.

Of those varieties that, after trial, have failed to produce remunerative crops, little will be said

and in our remarks in regard to soil, aspect, &c., they will not be considered. For the apple and cherry, undoubtedly the very best soil is a strong loam of a calcareous or lime stone nature. But all soils that will grow Indian corn, are good fruit soils. The surface should be sufficiently rolling to drain off all surplus water, at least within forty-eight hours. Steep hill sides are superior to gradual descents, unless thoroughly underdrained, particularly so for the apple. Never select, when it can be avoided, level lands, unless the subsoil is sand, or other material through which water can freely percolate. The banks of large streams are well suit to fruit culture; but the vicinity of small streams should be avoided, if possible, as should also sloughs and swamps.

If the grounds selected are rolling, it matters little what the aspect may be—a southwestern or northern being equally as good as any other. Wet or moist lands produce a bulky growth of wood, with small roots and few fibres—wood light, spongy, easily injured by cold, and soon decays. Dry, rolling lands produce less growth of wood, large roots, and an abundance of fibres—wood more firm, and capable of enduring cold, and far more productive. The most fruitful orchards we have ever known were those on steep hill sides. A soil that produces a large growth of wood usually produces little fruit. Select rolling ground then, if convenient; if not, plant by all means on such as you have. Fruit can be grown on an underdrained slough, as the writer can testify from experience, but not profitably.

In regard to soils suitable for small fruits, such as the gooseberry, currant, blackberry, &c., we cannot speak so positively as of the large, but would recommend rather moist soils—our experience and observation favoring such practice. All who have gathered blackberries from their native thickets, must have observed that the finest berries are found on level and moist soils, or near the border of sloughs, or where the ground is partially shaded. The same may be said of strawberries—however, both are produced on nearly all soils. In short, for large fruits a dry, and for most small fruits, a rather wet soil is best.

By far the most important question remains to be considered, viz.: what kinds or species, and varieties of fruit can be successfully produced in Northern Illinois? If we wish to produce the orange or fig, we must migrate towards the tropics, for we cannot, without artificial heat,

produce them here, and they can be imported cheaper than produced by such means.

Now, because the quince, nectarine, peach, pear and plum, cannot be grown with profit, it does not follow that this is not a “fruit country.” It only proves that certain kinds of very desirable fruit cannot be profitably grown here. If planting with a view only to profit, our advice is to plant none of the kinds last mentioned, but be content with the apple, cherry, grape, gooseberry, currant, blackberry, raspberry and strawberry. We do not advise the total abandonment of the pear, peach, plum and quince, but we do advise fruit growers not to depend on them to supply themselves and the market with fruit for we can assure them that they will oftentimes be very hungry for fruit, and the market that depends upon them very poorly supplied.

As has been remarked in regard to kinds, so with varieties. If we must grow the Roxbury Russet and Baldwin, or Newtown Pippin, and wish to produce them in abundance and perfection, by all means should we plant in New England or on the banks of the Hudson, for neither of them can be grown with reasonable success here. But if the object is to succeed, we already have a long catalogue of varieties from which to select, that are hardy and productive; many of them justly celebrated wherever grown, from the Atlantic ocean to the Mississippi river for their excellence.

We append a small catalogue of apples which experience has shown to be adapted to Northern Illinois:

Yellow June, Sweet June, Carolina Red June, Early Pennock, Smith's Cider, Monarch, Prince's Winter Sweet, Pomme Grisse, Vandevere, Yellow Bellflower, Raule's Janet, Small Romanite, Tollman's Sweet, Winesap, White Winter Pearmain and Willow Twig.

The list can be easily extended, but the foregoing will furnish good fruit the year round. Those who have little or no experience in this region, we would advise to procure from the most successful orchardist in their vicinity, a list of varieties that succeed best with them, and plant mostly of the varieties so obtained. We would not discourage experiments; what we particularly wish is, to so advise that the gardner may make a “sure thing of it.”

CHERRIES.

None of the Mazzard, or sweet varieties of the cherry can be relied upon, as the trees will live but a few years. But the varieties of the Mor-

relo. or sour cherry, if judicious selections are made, will thrive and produce fruit. Early Richmond is the best, all things considered. Mayduke is moderately hardy and productive. Other varieties with which the writer has no experience, are said to do well.

SMALL FRUITS.

Of small fruits, Red and White Dutch, White Grape, Victoria, and the common Red Currant, all do well. Houghton's Seedling Gooseberry, American White and Brincklies' Orange Raspberry and Neck Pine, Willson's Seedling and McAvoy's superior strawberry, are probably among the best varieties for this locality. The Fox and Clinton Grape do well with almost no care, after the first three years. Catawba and Isabella produce good crops of excellent fruit, with the vines protected in winter by a slight covering of corn stalks or straw. The grape is a delicious fruit, and should receive more attention.

It will readily be seen that much depends upon propagating the small fruits, for variety. We hope they may receive more attention than heretofore. First plant such as are known to succeed—afterwards, experiment.

TRANSPLANTING AND AFTER-CULTURE.

Preparatory to transplanting fruit bearing trees, shrubs, canes, vines, or plants, the ground should be plowed at least twelve inches deep, and all the better if plowed in the fall, even if the planting is not to be done until the following spring which time we prefer.

If trees are to be planted, lay off the ground, dig holes, if the soil is dry, at least sixteen inches deep, and sufficiently broad to receive all the roots when extended, without bending or crooking them. If quite moist, no holes should be made, the trees should be planted on the surface by covering the roots the required depth, with a mound of earth six or eight feet broad, more or less, according to the size of the tree.

On exceedingly wet soils, a mound should be raised, and the tree planted on its top. When all is ready, go to the nearest nursery, owned by an honest and intelligent man, procure the sorts wanted—not more than three to four years old—pay him liberally for trees with both roots and branches, have them well packed in your wagon, and protected with straw or other material, from the sun and wind, if they have far to go, and don't tell the nurserymen how cheap you can buy trees which, perhaps have neither roots nor branches; for if you buy such you will find them

dead at any price, as thousands in the West can truthfully testify. With your trees on the ground, proceed to plant by throwing well pulverized earth into the centre of the whole where the tree is to stand, making a little mound within the hole, so that when the tree is placed on the top of the mound, the roots will be as far below the general surface, as when taken from the nursery. Place the tree on the top of this mound in such a position that all its roots shall incline downward, naturally as when growing in the nursery; hold it perpendicular, now take a shovel full of well pulverized earth, lift it two and a half or three feet above the roots, and shake it off gradually, so that it will fall immediately around the stem of the tree; the particles of earth will roll down the sides of the mound, carrying the small roots and fibres along with them into natural or nearly natural positions. After the roots are covered, the earth may be thrown in with less care and greater rapidity, until the hole is filled level with the surface with loose mellow earth. Next, stamp it down firmly with your foot, keeping the toe toward the stem of the tree, pressing the hardest with the heel, so as to avoid breaking the small roots near the stem.

If the stamping has been well done, the tree will now stand firm; now fill about two inches above the general surface, leaving it loose and mellow. Either before or after planting, one-half or two-thirds of the previous season's growth should be cut from the end of each branch. When all is done mulch the ground around each tree from two to three feet each way from the stem, and three or four inches deep.

We have been thus particular in describing our mode of transplanting fruit trees, because not more than one in twenty of those we meet know how to plant a tree. Many reasons might be given for every part of the process we have described, but those advantages not already obvious will become so, we doubt not, whenever a fair trial is given.

Cultivate the soil in potatoes, corn or other hoed crops, for the first four or five years, destroying all weeds near the trees. If corn is grown in the fruit orchard, it is an excellent plan to let the stalks remain standing through the winter, as they will afford protection to the young trees by retaining the snow, thereby preventing the frost from penetrating so deep as it otherwise would. As the trees increase in size and age, the ground should be plowed less deep. A bearing orchard should never be plowed over

two and a half inches deep, many of the roots being about that depth beneath the surface. After an orchard comes into bearing, high cultivation should cease, as it stimulates a too late growth of wood, thereby endangering the health and life of the trees from frost. Plow only once a year, at least as early as the first of June. Sow buckwheat or nothing at all as suits the convenience of the cultivator. Sow no wheat or oats, or at least sow them seldom, nor manure the soil until the fruit begins to deteriorate, which will not be for a dozen years at least after planting, if the soil is new. Little or no pruning is required for the first twelve or fifteen years.

INSECTS.

A war of extermination must be declared against all insects that infest the fruit garden. The American or tent catapillars can be destroyed early in the spring, when they first hatch.

Another destructive catapillar makes its appearance in the latter part of June, which should be immediately attended to. The trees should be examined twice a year, in the spring and fall, near the ground, and all borers cut out. Do not trust to nostrums, but a sharp knife and a good eyesight. With all our care we believe that orchards will live here but a few years, and must be frequently replanted to continue a supply of fruit.

[We would call the attention of our readers to the *Unofficial Look* at Mr. Coe's orchard.—ED.]

Horses for the Army.

We have been in the habit of saying, for some years, that if it could have been so ordered in the creative economy of horses that the full force and weight of three of our ordinary farm horses could have been put into two, it would have been a very great thing for plow teams. There is a certain proportion in the make of a plow which must be maintained in order to the greatest efficiency of that implement; and that proportion requires a draft which our common farm teams cannot carry without an extra strain beyond what they can travel with, as a team ought to travel, which is expected to maintain a good gait, day after day. In view of these two facts, viz.: that the team is too light for the furrow, and the furrow too heavy for the team, we have estimated the damage to our agriculture, by the introduction of these little trotting horses, at many hundreds of thousand dollars. These pony Morgans are mighty smart for their inches, and very good in a light carriage on a good road, but a great failure in a farm team. They have not the weight to throw into the collar, and if they are forced to take a plow through a ten inch furrow, they must scratch to it with all their might, and come out with a puff and a

spread of nostril, that is painful for any humane driver to see.

It is not the Morgans alone, but the country is full of little spindling sorrel and other faded out things, which are fit neither for the road nor the field. During the earlier enlistments for the present war, no call was made for cavalry, and but little for light artillery, so that the only horses purchased for the army were for wagon transportation. We took notice that this stock was bad enough, and thought it a good way to get it used up so the country would be rid of such stuff.

But next came the call for cavalry and more light artillery, and we were ashamed of the State that could turn out only such stock, and of the government that had the cheek to send live white men into the field astride of such things, and pretend to call it cavalry. Doubtless the great prime fault was in this, that government set a maximum price upon the horses, to be purchased which could command only this ill-bred stuff, and then let the contracts in such a way that the sub-contractor received his commission in an inverse ratio to the value of the animal, so that mean horses paid the highest premium to the purchaser. Again, instead of employing a veterinarian to inspect the purchases, they were passed upon by conceited if not interested pretenders, and sent forward to be knocked up in wind and limb, and in a month's time worth what their hide and shoes would sell for.

Burdsall's cavalry, numbering fifty or sixty men, made up in Butler and Hamilton—the men furnishing their own horses—were about half of them fairly mounted; a company from Brown county we noticed in about the same condition, while others not a few, we have seen, where the horses would not have more force than a drove of mules, and were no more fit for a shock of arms than a squadron of ram cats. Even Barnett's famous battery of light artillery from Cleveland, which should have had a thundering troop of horse, was dragged by thin, ewe-necked nags, which were knocked hither and yon, whenever the gun carriages crossed a gully or struck a mole hill.

With all the *improvements* upon our horse stock, for the last ten years, the mass of horses are fit neither for the farm or the field; and the sooner we begin to lay on weight upon a good built, the better will it tell upon farm crops, and if need be, upon the efficiency of our mounted men in the field.—*Field Notes*.

We are in about the same fix with our teams on the prairies. We have too many small horses by far. Since the advent of railroads, we need less light roadsters and more heavy team horses. It is high time that we begin the change. The army will take up nearly all of our best team horses for cavalry and artillery service, and we shall have to do our farm work with riff-raff and brood mares that are left. The trotting ring at State and county fairs have done much to bring on this state of affairs, and we hope to see a change by the trial of strength in hauling heavy loads.

ED.

Hymn to the Flowers.

[The following exquisite verses, from the pen of Horace Smith, are well worthy of re-publication and re-perusal, at least once a year. But it is now a long, long time since they have been the rounds of the newspapers; and, in giving them a new start, we may be affording a new pleasure to some of our readers, as well as refreshing a pleasant memory for many others. The author, who is probably more widely known for his numerous pieces—especially for his connection with the noted "Rejected Addresses"—than in any other branch of poetry, furnishes, however, only another instance of the often repeated truth that genuine humor and deep pathos are not only nearly allied, but very frequently associated and blended in the same mind.—*Country Gent.*]

Day stars! that ope your eyes with man, to twinkle,
From rainbow galaxies of earth's creation,
And dew-drops on her lonely stars sprinkle,
As a libation—

Ye matin worshippers! who, bending lowly,
Before th' uprisen sun, God's lidless eye,
Throw from your chalices a sweet and holy
Incense on high!

Ye bright Mosaics! that with storied beauty,
The floor of Nature's temple tessellate,
What num'rous emblems of instructive duty,
Your forms create!

'Neath clustered boughs, each floral bell that
swingeth,
And tolls its perfume on the passing air,
Makes Sabbath in the fields, and ever ringeth
A call to prayer!

Not to the domes, where crumbling arch and column,
Attest the feebleness of mortal hand;
But to that fane, most catholic and solemn,
Which God hath plann'd—

To that cathedral, boundless as our wonder,
Whose quenchless lamps the sun and moon supply,
Its choir the winds and waves—its organ thunder—
Its dome the sky!

There, as in solitude and shade I wander,
Through the green aisles, or stretched upon the sod,
Awed by the silence, reverently ponder
The ways of God—

Your voiceless lips, O, flowers, are living preachers,
Each cup a pulpit, every leaf a book,
Supplying to my fancy numerous teachers,
From loneliest nook.

Floral apostles! that in dewy splendor,
"Weep without wo, and blush without a crime,"
Oh! may I deeply learn and n'er surrender
Your lore sublime!

"Thou wert not, Solomon, in all thy glory,
Arrayed," the lillies cry, "in robes like ours:
How vain your grandeur!—ah! how transitory
Are HUMAN flowers!"

In the sweet-scented pictures, Heavenly Artist!
With which thou paintest nature's wide-spread hall,
What a delightful lesson thou impartest,
Of love to all!

Not useless are ye, flowers, though made for pleasure,
Blooming o'er field and wave, by day and night;
From every source your sanction bids me treasure
Harmless delight!

Ephemeral sages! what instructors hoary,
For such a world of thought could furnish scope?
Each fading calyx a memento mori,
Yet font of hope!

Posthumous glories! angel like collection,
Upraised from seed or bulb interred in earth,
Ye are to me a type of resurrection,
And second birth!

Were I, O God! in churchless lands remaining,
Far from all voice of teachers and divines,
My soul would find, in flowers of thy ordaining
Priests, sermons, shrines!

The Feed and Growth of the American Robin.

The following communication by Professor Treadwell, of Cambridge Massachusetts, to the Boston Society of Natural History, giving a detailed account of the feeding and growth of the American Robin, contains much that is highly suggestive to those who regard birds as a cost and a nuisance.

On the prairie, it is very desirable to plant trees, if for no other purpose than to induce the robin and other birds to breed their young, to keep down the numerous insects that would otherwise destroy the crops. A good flock of robins would assist materially in holding the "army worm" in check. It is noteworthy that prairie orchards are less infested with worms than those near the woodland. A few birds nesting in the trees feed upon the insects, and they are thus held in check. Birds always prefer small groves and clumps of trees to the woodland, and will therefore, be found in greater proportional numbers.

We never allow the shooting of quails on our premises, as we consider them invaluable friends, especially in the nursery. There may be some birds that damage the orchardist more or less, especially near the forest, as they come in after the fruit at the time of moulting, without having done their part in previously keeping down the insects. The Sap Sucker we especially eschew, and hold in no high esteem. Ed.

"When caught, the two birds experimented on were quite young, their tail feathers being less than an inch long, and the weight of each

about twenty-five pennyweight, less than half the weight of the full grown bird; both were plump and vigorous, and had evidently been very recently turned out of the nest. He began feeding them with earth worms, giving three to each bird that night; the second day he gave them ten worms each, which they ate ravenously; thinking this beyond what their parents would naturally supply them with, he limited them to this allowance. On the third day, he gave them eight worms each, in the forenoon; but in the afternoon he found one becoming feeble, and it soon lost its strength, refused food, and died. On opening it he found the crop, gizzard and intestines entirely empty, and concluded, therefore, that it had died from want of sufficient food, the effect of hunger being perhaps increased by cold, as the thermometer was about 60 deg. The other bird, still vigorous, he put in a warmer place, and increased its food, giving it the third day fifteen worms; on the fourth, twenty-four; on the fifth, twenty-five; on the sixth, thirty; on the seventh, thirty-one worms. They seemed insufficient, and the bird appeared to be losing plumpness and weight. He began, then, to weigh both the bird and its food, and the results were given in a tabular form.

On the fifteenth day he tried a small quantity of raw meat, and, finding it readily eaten, increased it gradually, to the exclusion of worms; with it the bird ate a larger quantity of earth and gravel, and drank freely after eating. By experiment, it appears that though the food was increased to forty worms, weighing twenty dwt., on the eleventh day the weight rather fell off, and it was not until the fourteenth day, when he ate sixty eight worms, or thirty-four dwt, that he began to increase. On this day the weight of the bird was twenty-four dwt., he therefore ate forty-one per cent. more than his own weight in twelve hours, weighing after it twenty-nine dwt., or fifteen per cent. less than the food he had eaten at that time; the length of these worms, if laid end to end, would be about fourteen feet, or ten times the length of the intestines. To meet the objection that the earth worm contains but a small amount of solid, nutritious matter, on the twenty-seventh day he was fed exclusively on clear beef, in quantity twenty-three dwt.; at night the bird weighed forty-two dwt., but little more than twice the amount of flesh consumed during the day, not taking into account the water and earth swallowed.

This presents a wonderful contrast with the amount of food required by cold blooded vertebrates, fishes and reptiles, many of which can live for months without food; and also with that required by mammalia: a man, at this rate, should eat about seventy pounds of flesh a day, and drink five or six gallons of water. The presents itself, how can this immense amount of food required by the young bird be supplied by the parents? Suppose a pair of robins, with the usual number of young ones—they would require, according to the consumption of this bird, two hundred and fifty, or their equivalent in insects or other food, daily; suppose the pa-

rents to work ten hours, or six hundred minutes, to procure this supply, this would be a worm in every two and four-tenths minutes or each parent must procure a worm or its equivalent in less than five minutes during ten hours, in addition to the food required for its own support.

He was unable to reconcile this calculation with actual observation of robins, which he had never seen return to their nests oftener than once in ten minutes. After the thirty-second day, the bird had attained its full size, and was intrusted to the care of another person during his own absence of eighteen days; at the end of that period the bird was strong and healthy, with no increase of weight, though its feathers had grown longer and smoother. Its food had been weighed daily and averaged fifteen dwt. of meat, two or three earth worms, and a small quantity of bread each day, the whole being equal to eighteen dwt. of beef, or thirty-six dwt. of earth worms, and it has continued to eat this amount until the present time. The bird having continued, in its confinement, with certainly much less exercise than in the wild state, to eat one-third of its weight of clean flesh daily, he concludes that the food it consumed when young was not much more than must always be provided by the parents of wild birds. The food was never passed undigested; the excretions were made up of gravel and dirt, and a small quantity of white semi-solid urine.

He thought every admirer of trees might derive from the facts a lesson, showing the immense power of birds to destroy the insects by which our trees, especially our apples, elms and lindens are every few years stripped of their foliage, and often many of them killed. The food of the robin while with us consists principally of earth worms, various insects, their larvæ and eggs, and a few cherries; of worms and cherries they can obtain but few, and these during a short period, and they are obliged to subsist principally on the great destroyers of leaves, canker-worms and some other kinds of caterpillars and bugs. If each robin, old and young, requires for its support an amount of these equal to the weight consumed by this bird, it is easy to see what a prodigious havoc a few hundreds of them must make upon the insects of an orchard or park.

Is it not, then, to our advantage, he asks, to purchase the service of these robins at the price of a few cherries? There has lately been some improvement in preserving our birds, and with a little more protection, he thinks such an increase of them might be obtained as would save us from all the labor required for the appliances of tar, oil, zinc plates, and all other methods by which we seek, with very imperfect success, to destroy our mischievous insects.

PATENT MAGNETIC HAMMER—The latest Yankee patent is called the magnetic Hammer, a dynamic instrument, which is magnetized in order to pick up small nails and tacks, and save the fingers of the person using it.

One of the Prairie Kings, and How He does Some Things.

Mr. Bragdon, late of the *Prairie Farmer* writes to the *Rural New Yorker* an account of his visit to Isaac Funk, an extensive farmer near Bloomington, Ills. This Mr. Funk is a native of Ky., now upwards of sixty years of age; came with his father to Fayette county, Ohio, in 1807 and removed to Illinois in 1824, where he has accumulated his vast property. As the practice of a successful man is one of the best lessons for those who desire to succeed, we draw upon Mr. Bragdon's notes for what follows:

HOW HE WINTERS CATTLE.

Mr. Funk usually winters over from 700 to 1,000 head of cattle, and stall-feeds for early spring market from 300 to 500 head. He markets stall fed cattle about the first of April. He buys cattle all the time, whenever he can do so profitably. Those he sells in the summer are generally three years old. The class he stall-feeds are generally four years old. The Eastern reader will think it a queer kind of stall-feeding, when he is assured that not one of these animals go inside a stall or are tied up during the winter. A little further on we will give Isaac Funk's definition of stall-feeding. He prefers to buy cattle (steers) the spring they are two years old. They usually cost then, if good ones, from \$18 to \$25 per head. These are kept one summer, one winter, and the half the next summer, when they are in condition to market, and will average from \$45 to \$52 per head. He winters his cattle on shock corn. The steers to be wintered through and marketed in midsummer are "strong fed."—Those that are to go to market the last of March or first of April, are "stall fed." The difference in the two modes of feeding is, that the bullock that is being stall-fed gets all he can eat and a good deal more, while the one that is strong-fed, gets enough to keep him thriving finely all winter—gaining in flesh and growing too. The corn is drawn from the field on wagons, to the pasture or lot where the cattle are herded. One man feeds from seventy-five to one hundred head, and this care occupies him from early morning until late at night. He rises and eats his breakfast by candle light, and draws corn with from two to four yoke of oxen—the amount of team depending upon the condition of the soil—all day, and returns and eats his supper by candle light again. Mr. Funk says the true way is to provide two fields for each company of cattle. Feed the cattle in one field to day, and in the second to-morrow; to-morrow turn one hog for every strong fed, or two hogs for every stall fed animal into the field in which the cattle were fed to-day. He says one acre of good corn will winter one bullock if strong fed; if stall fed, it will require one acre and a half per bullock. The cattle have no other feed, and no protection, except timber, if they happen to be feeding near it. Salts his stock with this feed about every third day, and provides plenty of water. Beef, if fit to go to

the New York market, sells here at \$3 to \$4 per cwt., gross; packing cattle at \$2 to \$2 50 per cwt., gross.

SWINE—BREEDS AND MANAGEMENT.

I have indicated above the way the swine are fed. They are mainly bred here on the place. The present stock consists of a mixture of Irish Grazer, Bedford, Byfield and Berkshire. Objection is made to the Berkshire because they do not cross well with common hogs; neither do they dress as heavy as many other breeds. The Byfield are liked better—a good deal better. The leaf lard in the Byfield will weigh nearly or quite double that of the Berkshire. The Byfield will not eat as much in proportion to their weight as the Berkshires. He regards the Chester Whites as excellent, but has had little or no experience with them. The average market price for pork here has been from \$4 to \$4 50 per cwt., net. Sheep are regarded more profitable than hogs.

MULES.

What does it cost to keep a mule until it is three years old?

"Do not know; never calculated. But it does not cost as much as it does to raise a steer. The past three years, a good fair average mule has been worth \$130. A part of the time he would bring more. These figures are for an average mule, when thirty or forty are sold together. A good one would bring more than that. Mr. Funk feeds them on shocked corn, hay and sheaf oats. They are never stabled. If the winter is open, they will live half the time on blue grass pasture without other feed. When sheaf oats are fed, they are cut, but it is not profitable to cut the sheaf fine in a cutting box. It is found that if it is cut three or four times with a broad ax or hatchet, the mule eats it with a better relish, and eats it up cleaner than if cut finer. The mares from which he breeds mules are never fed on corn at all. He has his mares ten years old that have never tasted corn. A good sized mule is often fifteen hands high, if made proportionally. Mr. F. thinks such an one is worth more than a larger one. He finds them longer lived than horses. Places their average age at twenty-five to thirty years in this country. A good jack here costs from \$500 to \$800.

HOG CHOLERA.

He has never had any cases of this disease on his place, although cases have been reported within six or eight miles of here. Thinks the disease is easier prevented than cured. He would not herd them in close pens. Would feed sulphur copperas and ashes, and provide them with fresh grass and good water. Good sweet grass and wide range are essential to good health. If confined in close damp places, with access to the black soil of slough, they are sure to become diseased. The black slough soil is poison to swine; fattening hogs do much better on a yellow clay soil than upon the black soil of our prairies.

BLOODY MURRAN.

This disease has troubled his herds more than

any other. Some think it brought on by a sudden change in the condition—from a poor to a fleshy state, and that thus the blood vessels are affected. Mr. Funk thinks poor water the cause in some instances; and the manner and condition in which the animal is fed, in others. A good preventive is wood ashes and sulphur fed with salt. He does not think there is any help for the animal after it is once positively diseased. The best remedy is to give some thorough purgative as soon as any indications of disease are discovered. It sometimes happens that this will prevent mortification, which soon takes place unless some such measure is adopted. He advises bleeding cattle, especially those which have been strongly fed in the spring. He bleeds all of his by slitting the tail with a knife. Especially if the end of the tail is hollow this should be done. Sometimes he ropes the neck and bleeds the animal there strongly. He thinks spring bleeding very useful—even necessary. He also recommends mixing wood ashes with the salt and feeding it to cattle. It helps keep them healthy, sleek and smooth.

BUYING BULLS OF PEDDLERS AND AT FAIRS.

He would not buy a bull at a fair, so many that are there exhibited are fitted up to exhibit and to sell. Those that can be bought are rarely worth buying. He prefers to go and see the stock on the farm where it is kept—to examine the offspring of the animal.

If a man purchases one of these pampered bulls at fairs, he rarely gives him the care necessary to keep him in prime condition; if he knows *how*, he does not do it; few men know *how*. Of course the bull runs down, the owner becomes disgusted and tells his neighbors fine stock is all a humbug. If, however, he is careful to go and see the stock in the pasture, where it is kept economically, without any polishing process, he is better able to judge of its real merits, and is less likely to wish his purchased animal in Dixie two months later. Three-fifths of these exhibition animals are spoiled. Mr. Funk does not advise a man who proposes handling stock, to buy full blood fancy cattle. Would rather have crosses of a thorough bred bull with native cows. He thinks there is more money in proportion to their cost in the grades than in the pure bred Durhams. He likes the Durham better than the Devon, as a standard stock.

HORSES.

Mr. Funk breeds few horses. He regards mules a great deal more serviceable. He has some Morgans, but, while they are good roadsters, he regards them too light for farm service. He says we want a class of horses 15 to 16 hands high, well proportioned, that will make good saddle horses, fair roadsters. Weight is necessary—not too heavy, however. Horses that will 1,250 to 1,300 pounds are about right if they are rightly put together. If a horse weighs less than 1,000 pounds, he is too light for farm uses.

HOW HE GROWS CORN.

The ground is prepared by plowing and harrowing, and planted in check rows with Brown's planter. After it is sprouted, a large two-horse harrow and team is put on, and the ground thoroughly harrowed, regardless of the corn. This done, it is cultivated with a three-toothed cultivator, going twice in each row; then again with a double shovel plow. Frequently, after the shovel plow, a scouring plow is used, but a double shovel plow is regarded the best implement to use after the harrow. He prefers to harrow before the corn is up. Many in this country wait until the corn appears, then knock the centre tooth out of an A harrow and drive astride the rows. If the ground proves cloddy, he rolls it immediately after harrowing with a heavy field roller. He says rolling and harrowing pay excellently here, the soil being inclined to grow cloddy. It must be pulverized so that the young plants may grow without being retarded. One reason why Brown's corn planter is so generally approved in this country, is because it rolls the earth which covers the hills, and pulverizes it. The roots of the young plant do not have to ramble over a square rod to find food—to find something beside dry clods and cold air. Mr. Funk recommends fall plowing, and the back furrowing the ground in narrow beds. He says it will pay; it will increase the crop so as to more than pay the inconvenience which may result in the prosecution of the harvest. Such testimony from a large farmer who does his work in the cheapest way, looking to the greatest profit, ought to be received as having a good deal of weight.

GRAIN GROWING.

But little wheat or oats are grown on this farm. Corn is the principal crop cultivated. Mr. Funk is down on wheat culture, and down on growing grain of any kind to draw to market. He says a man worth five or six thousand dollars may soon sink it in wheat growing. And he asserts that if a man grows a crop of corn yearly, and being too poor to buy stock to feed it, sells it in the shock on the ground where grown, at 15 cents per bushel, he will be worth at the end of five years, double the money that his neighbor will who grows the same amount of corn and draws it five miles and sells it at 25 cents a bushel. Why?

Because the man who draws the corn five miles loses time, labor, wear and tear of wagons, gets his money in dribblets, and it goes in dribblets; at the end of five years it is all gone. I tell you it is better to sell it at five cents at home, and not move it, than to move it five miles. It costs more than the extra ten cents to move it, in the end. It does not pay to draw grain. True, a few years ago, some men grew wheat and got \$1.50 per bushel for it, but had they been compelled to take 25 cents for it, they would have been better off to-day. They would not have spent all they had in trying to grow more. The wealthiest parts of Ohio, to-day, are those parts where the farmers could not market their grain, and were compelled to put it into stock. So it is in Illinois.

[For the Illinois Farmer.]

TISKILWA, Bureau County, Ills., }
October 3d, 1861 }

ED. FARMER:—Wishing to have our county represented in the columns of the ILLINOIS FARMER, I will jot down a few items for the benefit of your readers.

THE CROPS.

The spring wheat crop is light, owing, in a great measure, to the wet, cold spring, which gave it a poor stand, and prevented its tillering out as usual.

The threshing machine is demonstrating the yield to be not over twelve, and may be as low ten bushels to the acre.

Corn will turn out a little better. The ears are very short, and many fields are seriously injured by the "White Grub," and in some instances, large patches are destroyed, so that the crop, on the whole, will be a light one, in no case exceeding forty bushels, and on an average of not over twenty to twenty-five bushels per acre, while to the north of us it will be much below these figures.

Rye is a fair crop, though the "Army Worm" damaged it to some extent. They eat off the blades, but did not appear to injure the berry.

Oats and hay are a fine crop.

The White Grub came in here for a share, and the timothy meadows suffered by them. In many places they eat off the roots so that you can pull up the turf by grasping a handful of the heads and lifting them up, and if they are to continue another year, they will ruin many of our meadows. [Probably they won't trouble you for the next two years. See page 282, September No.—ED] The late rains are injuring the grain in the stack very seriously.

Potatoes are a light crop, not more than a supply for home use, and as the rivers to the South are closed against this vegetable, perhaps it is just as well the crop is a light one.

FRUIT

Is better in this county than for many previous years. We have but few old orchards, and these are doing well. The young orchards are doing better for many reasons, the selection of varieties in most instances being very unfortunate, in fact, people did not know what varieties were best adapted to our soil and climate. Many old eastern varieties do well here, while others are not worth taking as a gift; better pay fifty cents for a tree that will bear one-half to a

bushel of fruit the third or fourth year after setting, than to take as a gift others that will not bear for eight or ten years, and then but sparingly.

Allow me to tell some of your readers who have not set trees, and others that have orchards that do not bear, how I succeeded in starting an orchard.

Five years ago last May, I settled on a new farm, and the next spring I set in my garden seventy-three trees, mostly fall and summer fruit, of these, fourteen varieties have borne the past season. Four Early Pennock that had about three pecks each, four Tompkins, one half to one bushel each, two Cooper's Early White, one bushel each, six Fall Wine, one bushel each. Some other varieties had very good specimens, but shy bearers. At the same time, many trees that did not bear are very thrifty, large trees, I suppose they will come into bearing by and by, and any person who has been without fruit for years can estimate the value of early bearing varieties.

Three years since, I planted out one thousand trees, all winter apples, and only twenty-two varieties. This season some thirteen or fourteen varieties have fruited, the following being the most prolific:

Willow Twig and Wagner, average one-half bushel to the tree, Sweet Romanite, Turner's Seek-no-further, Dominie and Winesap, about one-fourth bushel.

Many other varieties are hardy and early bearers. Before I close, allow me to say that I get my trees at the Pleasant Hill Nursery, of Verry Aldrich. I think he keeps the very best trees, and of the best varieties in the country. I have seen the Wagner loaded with fruit in the nursery rows at four years, and this season I am told that even three year old trees are bearing.

Mr. Aldrich's trees are headed low, which I think is necessary in this climate.

In your September No. you speak of the Gray Willow; please tell us what it is.

Yours Truly,

M. GREENMAN.

—Mr. Greenman has been very successful in fruit growing, that is certain, and we suspect that much of it is due to the low headed trees of our friend Aldrich. This subject is pretty well set forth in the October number of the FARMER, but will bear repeating. The Early Pennock is among the most valuable of our summer varieties, its growth is vigorous, hardy, and fruits very young, three valuable qualities that cannot

well be over looked. The fruit is valuable for both the table and cooking, its large size, fine form, and beautiful outside will always make it attractive in the market. Cooper's Early White is a productive young bearer, but we would not plant it largely, it being a fall variety; so of the fall Winesap, its season of keeping is too short. The "Tompkins" we have not fruited under that name. The Willow Twig is to take the highest stand among our valuable winter fruits. The Wagner has not been extensively tested in the West, but it gives fair promise. Sweet Romanite and Turner's Seek-no-further are local names, and not much known. Domine and Winesap are becoming great favorites.

We have now come to consider some settled facts in regard to fruit culture on the prairie, among which is shelter, drainage, aspect, selection of varieties, low heads and thorough culture. We want more such facts as the above, with which to stir up our people in regard to this important subject of fruit growing.

The "Grey Willow" is a forest tree of the Middle States, its growth is rapid, and as it splits fine, and is rather durable, is valuable for prairie farms.

Ed.

Rotation of Crops.

The *Country Gentleman* says that James Beatty and Sons successful farmers in Cayuga, county N. Y., adopt the following rotation:

Their fields successively lie in meadow two years, in pasture the third, the fourth corn is planted on the sod, the manure having been applied the previous autumn, and the sod plowed just before the planting. Corn is followed the fifth year by barley, which is seeded to clover by rolling. This clover is pastured with sheep, the pasture thus obtained being equal to the expense of seeding until the following summer, when it is converted to summer fallow for wheat. The droppings of the sheep, and the crop of clover furnish an excellent preparation for this grain, which is harvested the sixth year. It is followed by a growth of timothy and clover, which constitutes meadow two years and pasture one year, as already mentioned.

Underdraining and this rotation "have more than double the crops in the aggregate," during the last ten years.

Our farmers pay too little attention to rotation, in many cases, wheat is sown after wheat for a generation. On the Mississippi bottom, below Quincy, this practice has been continued, that the memory of man runneth not to the contrary. In one case, on a farm that we visited the past

summer, and were triumphantly shown a crop of winter wheat estimated at thirty bushels to the acre that was the seventeenth crop in succession. This shows that we have a most enduring soil, but it must yield in time.

The army worm had done it a great kindness by eating out the chaff, and next season the crop will again be clean. An occasional crop of clover would go far to husband the resources of this soil.

Ed.

Cheap Threshing Machine Wanted.

We have machinery for assisting in the performance of a great variety of farm operations, but yet there is one which remains to be supplied. Whoever will take upon himself to supply this want, will become a public benefactor.

We have many farmers in Ohio, especially in the eastern and southern portions of the State, of limited means, possessed only of a few acres. They are enabled, with economy and industry, to raise enough of small grain to "bread" their families, with perhaps a very little to spare, and to furnish the requisite amount to feed their stock. Their crop, in this particular, even in the most abundant seasons, is not sufficient to justify the expense of securing the threshers usually employed, and hence the only way they have to get out their grain, to use the farmer's language, is either to employ horses in tramping it out—a most filthy and disagreeable way—or resort to the old fashioned and now generally abandoned flail.

Now, what is wanted is a cheap, easily constructed, portable, light power thresher—a machine the farmer can take on to his barn floor, in the fall or winter, or on wet days, at seasons when to labor out doors is impracticable, and which, with his own unaided strength, with perhaps the assistance of a boy to feed it, will enable him to thresh, or get out twenty, thirty, or forty bushels of small grain a day.

Whoever will put his wits to work and bring forth from his brain such a machine, even if it should on the first attempt be somewhat crude and imperfect, will live in history among the most notable, worthy, and deserving inventors of the age. He will have accomplished as much, if not more, for agriculture as McCormick or Manny, or any of the inventors whose mowers and reapers are doing so much to alleviate the labor and enlarge the industrial operations of the country.—*Field Notes.*

—Such a machine has been invented years ago, and is now in use in many parts of the West. We, of course, refer to the endless chain railway horse power thresher, known as the "Wheeler patent." For use in a barn there is no other power that compares with them. They are compact, strong and durable. A half a dozen farmers can club together and purchase one of these, and which will do the threshing of a small neigh-

borhood. They are easily moved from place to place. These machines have for a long time been manufactured at Albany, New York, by Wheeler, Melick & Co., whose card, from time to time, has appeared in the FARMER. Of late, they have attached a self-acting break or governor, that in case the band runs off the machine is at once stopped. This has been a long needed improvement, and now there is little more to ask of genius in this line. For grinding or sawing wood these machines are valuable.

Ed.

BLOODED STOCK.—Last Monday commenced the sale of the personal property of Thomas Simpkins, deceased. We attended on Tuesday last, and found a large crowd present. There were several buyers from a distance. What we saw sold went pretty high, with but one or two exceptions—considering the tightness of the times. A three year old filley went for \$139. Twenty-five two year old steers sold for over \$30 a piece. Simpkins' celebrated bull, Marshall P. Illissier, was bid off by A. W. Brown, near Perry, at \$460. We presume this noble animal has not his equal in the State. He took two premiums in England; and he has taken county and State premiums wherever he has been exhibited. He cost Mr. Simpkins about \$2,000. We are glad that the Marshall, as well as several other fine animals from the Simpkins' estate, do not leave Pike county.—*Pike Co. Democrat.*

SINGULAR FRENCH TRIAL.—At an assize court lately held in Calvados, France, M. Leprevost, the postmaster of Courselles and a retired army captain, a man of good reputation hitherto, was tried for stealing money from letters and for forgery. His daughter, who was originally included in the indictment, committed suicide in prison by sticking pins and needles in her chest. The case was complicated by an accusation against Captain Leprevost for seducing this daughter when she was only 13 years old; and by a counter charge of the prisoner that one of the principal witnesses against him was a postoffice inspector, who was a lover of Mdlle. Leprevost, and who brought these false charges against the father. The Captain was acquitted of all the charges but that of forgery, and was sentenced to imprisonment for life.

—The Charleston *Mercury* tells its country readers to save their goose quills, as the supply of steel pens will soon give out. If all the geese in the South have quills, the supply will be ample.

Sorghum Molasses.

No great revolution of its kind probably has ever taken place than the introduction and successful culture of the Chinese sugar cane in the Western States. But five or six years ago it was almost totally unknown among us, now it has become one of our staple products, destined to hold as important a place as corn or wheat. It would not at all be difficult to detect the hand of Providence in it, for now, since we are shut off by a necessary blockade, from our former sources of supply, we are not only manufacturing it in quantities sufficient for home consumption, but actually shipping it off to other markets.

Nearly every farm in this county of any considerable size, has its mill and evaporator, and we may say that, almost without exception, every farm has its patch, greater or less, of sugar cane. The quantity of molasses made this year will far exceed that of any previous year. The quality is also far superior.

Mr James Scripps & Sons up to this period, have made nearly two thousand gallons. Mr. John McCreery, John Harrington, Henry Kirkham, James Ellis, and many others are manufacturing largely.

We are informed that the cane this year is largely adulterated with broom corn. We would advise farmers to send abroad and procure a pure article of seed for their next crop. Otherwise it will certainly prove a failure.—*Schuyler Citizen.*

In this county of Champaign, the increase is likewise great, and doubtless full up to the local demand, at the same time the consumption is double, on account of the abundance and cheapness of the supply. Just now, when sugars and all other sweetening has grown dear, this comes in good time to fill up the deficiency. In one direction we saw four mills within a distance of four miles, three of them wooden, with an average capacity of one hundred and fifty gallons a week, each, and the other of iron, of three hundred, in all seven hundred and fifty gallons a week. This, at thirty-five cents a gallon, is worth two hundred and fifty dollars, multiply this by six, the boiling season, and we have fifteen hundred dollars of sirup in less than six miles square. This may not look large, but multiply it by the number of townships in the county, and we have a respectable sum saved to the county, or at least adding so much to the health and comfort of living. We will guarantee that these one hundred casks of over forty gallons each, will save a deal of quinine, calomel and rhubarb that is taken for ague and fever, that the sirup will ward off.

Ed.

INSECTS WHICH DESTROY THE ARMY WORM.—The *Ohio Farmer* mentions the discovery in that State, of two insects which feed upon the caterpillars of the army worm. Success to them.

Brighton.

ED. REPUBLICAN & TELEGRAPH:—A great deal has been said about the location of the State Fair at Brighton this year, and the discomforts attached to the same, but it should be generally known that the Society had no other offer from the citizens of Chicago, which was in conformity with the established usage of fitting up the grounds and placing them at the disposal of the Society free of charge, notwithstanding the effervescing of newspaper men and other hired *blow-hards* who are willing to break down the Society because they have been foiled in their attempts to secure the location in their own particular back yards. The receipts on two days of fair weather demonstrated another fact, that had the weather been such as might have been reasonably expected at this season of the year, there would have been no fault found outside of Chicago at the location of the Fair at Brighton. The grounds were well fitted up—the buildings were large, commodious and judiciously arranged, and, with the exception of the scarcity of water the first few days, everything was satisfactory to exhibitors and visitors; but three *heavy* rains within one week, are unprecedented in the history of Fair weeks in the State of Illinois. *

A little too fast, friend *Telegraph*, we know of a large number who would have been exhibitors, but looking up to the board roofs of the buildings, would not risk their goods under them. One large lot of paintings were brought on the ground, and fortunately the owner took them back to the city, or he might, and probably would have lost them.

The buildings were not ample, but they were ample for all that could reasonably have been expected. For this no one was to blame, for no one anticipated such an extensive show of stock and machines. The stock of water for drinking was short through the whole Fair, in fact, we did not see but one cask of water on the grounds for this purpose throughout the whole time.

Had the weather been fine, we do not think there would have been any complaint on the score of water for stock. But our friend gets at more of the truth in the following:

The weather during the past week has been unfavorable in the extreme. With one or two pleasant days only the officers of the fair have labored under disadvantages unexampled in the history of this fair since its organization. Its location has been sufficiently discussed and sufficiently regretted, and from the nature of the grounds, the uninviting scenery on the way to and from it, its distance from the city, and the prejudices prevailing against it, we are surprised at the selection, by the Executive Committee of the Society, of the "Brighton Course." The result will be perhaps but a slight injury to the future interests of the State Society, but such

an advertisement of the mud, slime, and disagreeable effluvia of "Brighton," and the way to and from it, to all the people of the State, that no man in his senses will ever desire to visit it hereafter. The officers of the Society put forth every exertion for the advancement of its interests and to make the Fair attractive—Mr. Van Epps, the President, showing more than his usual energy and skill in his department—and if the Fair has not been an entire success it cannot be attributable to them, or to anything over which they had control, but rather to a train of untoward circumstances and outside influences, all operating against its interests, which could not be provided against, among which the bad state of the weather had the greatest influence. *Chicago, at whose request the location was made near the city, showed a cold shoulder from the first with a remarkable unanimity*, simply because it was located at Brighton, and not at Cottage Grove, and on every other vacant piece of ground in and around Chicago, for the express convenience of every separate interest in the city.

The officers of the Society would be justified in not allowing another Fair to be held at Chicago for all time to come. We know not what course will be adopted in reference to the future; but this we know, that the people of the State at large, who expected much from the good taste and arts of that city, were sorely disappointed with the result.

Cotton in the Sandwich Islands.

The cultivation of cotton is to be tried on a new field. Late advices from the Sandwich Island state that King Kamehameha has retired to his country seat at Kona for the purpose of devoting himself principally to experiments with cotton. The *Honolulu Commercial Advertiser* says:

"The King has recently purchased some cotton seeds and intends to appropriate a portion of his land to the cultivation of cotton, so as to give it a fair trial, though he says he has not much faith that the islands are to be suddenly enriched by this branch of agriculture, but is ready and anxious to take the lead, and give the force of his example. Like every other new branch of industry, money must be expended and lost in experimenting; and when the necessary experience is gained, some one will succeed in making cotton-growing profitable."

Bryant describes the splendors of our woods—"as if a gorgeous sunset had fallen from Heaven to earth, and were reposing among the masses of summer foliage." The description is particularly appropriate at this season.

—"Boy, how is your sweetheart getting along?" "Pretty well, I guess; she says I needn't call any more."

Handling Steers for Oxen.

Several years ago, says the *Field Notes*, while visiting in Medina county, we were treated to a sight of ox-breaking which it is pleasant to remember. A gentleman in Litchfield had four Devon steers in training; with a long whip stock and short lash, he paraded without yokes, by ones, by twos, by fours, changing front and any way he chose, and all without noise or confusion, but by simple kindness and perseverance. We notice an item in this line from the *Tribune* report of the New York State Fair this year, which, with the general subject, we commend to all the boys and men who have cattle breaking to do.

I have seen one thing to-day which I wish every farmer, and every man who ever drives oxen, or handles cattle in any way, could see as I have seen. It would teach him the great benefits of the law of kindness. Here is a boy perhaps ten years old, training and handling six steers, not yet two years old, with all the ease that an experienced ox-driver handles a single pair while in the yoke; and he has no yoke, no rope, nor does he speak a word above a loud whisper, and only occasionally strikes a blow that would raise a blister upon the skin of a child. All his actions are based upon the laws of kindness, with a firm determination that all his orders must be obeyed.

For an hour that I stood watching, there was another pair of older steers standing just outside of the circle of his operations, patiently waiting their turn, until some one asked:

"Can you handle eight as well as six?"

"I could," he modestly replied, "if my whip was a little longer. I can't reach the outside one when in line with this short whip, but I will try."

And so he did; and notwithstanding his short whip, all were managed with the utmost ease, and all who saw a lesson taught which none seemed tired of learning. I hope they will profit by it. Will those who read also profit so far as to pursue the same course in training all domestic animals. Teach your boys, too, to yoke up the young steers, to use them kindly, with patient perseverance, to make them as bidable as this boy has these now on exhibition, and then they will make good and valuable oxen.

—When a boy, we broke several yoke of steers, and always found that gentleness was by far the most certain way of making them handy. This loud bawling at, and continual whipping and mauling of steers is not only bad in its effects on the dumb brute, but tends to brutalize the driver. We never keep such a man in our employ.

Ed.

—Miss Dubois says the first time a young man squeezed her hand, she felt as if she was in land that rainbows come from.

Lambert Wheat in Highland county, Ohio.

The increased ravages of the weevil among the wheatfields of our county for some years past, has led a number of our farmers to try the experiment of procuring seed wheat from other sections of the country, in the hope of obtaining some new variety which would be exempt from the attacks of that destructive insect. Among those who have experimented in this way, the most successful we have heard of is Mr. Jas. H. Anderson. Mr. Anderson last week informed us that he had raised about seventy acres of a new variety of smooth wheat, called the "Lambert," or "weevil-proof," the seed of which he obtained year before last, from Muskingum county. He raised eight acres of this wheat last year, which yielded well, and was entirely unaffected by the weevil, while his common wheat, sown on the same soil, and under precisely similar circumstances, was badly injured. He reserved sufficient of his crop to sow seventy acres for this season, and sold the rest to his neighbors for seed. These seventy acres will yield him about fourteen hundred bushels, over one thousand of which he has already sold at \$1 50 per bushel, making a pretty handsome operation for times like those. The grain is large and plump, and Mr. A. assures us that there was not a head of it injured in the least by the weevil, although it is estimated that nearly one-half the entire wheat crop of our country this year has been destroyed by this cause; all who have sown this kind of wheat have in every instance, as far as he has heard, met with the same success.

Mr. Anderson informs us that there is a remarkable peculiarity about the chaff, (or husk covering the grain) in this variety of wheat. It is much stiffer and harder than that of the ordinary wheat, and what is most remarkable, never opens so as to expose the grain inside. The grain is thus entirely protected from the attacks of the weevil, which is unable to penetrate the husk. The grain is of considerably lighter color than the Mediterranean wheat, but not as fair as the common white variety.—*Hillsboro' News*.

NEW ELEVATOR.—We are glad to learn that one of our most enterprising Warehouse firms is about commencing a new Elevator on the North Branch, to be used mainly, we believe, for receiving grain which comes in over the Chicago and North-western Railroad. It will be of the largest size, and built in the most substantial manner, and will be completed at an early day. It will be furnished with ten of Fairbank's five hundred bushel Hopper Scales, each of which, so perfect will be the machinery, can be loaded to its full capacity and the load discharged in a few minutes. This shows the immense amount of grain which can be handled in this Elevator, and is a sufficient guaranty to farmers as well as shippers, that correct weights will be given.—*Chicago Tribune*.

Setting an Orchard.

The following article which we prepared for the *Chicago Tribune*, we deem of too much value to be lost in the files of a daily paper, and therefore transfer it to the *ILLINOIS FARMER*, and commend it to the careful attention of our readers.

ED.

The time for tree setting is near at hand, and so soon as a heavy frost checks the growth by loosing the footstalks of the leaves, no further time should be lost. In the course of ten days at farthest this will doubtless occur in nearly all parts of the State. There is a prejudice against autumn setting of fruit trees in the north part of the State, but this, we suspect, has been occasioned by the purchase of trees from the East; but as most of the trees now set are home grown, we may consider the difference and act accordingly.

Eastern trees should never be put in the orchard in the fall, in Northern and Central Illinois, for the reason that they are grown in a climate more moist and of a lower temperature; added to this, in too many cases, they have been stimulated by underdraining, rich manures and high culture; their growth is late and succulent, and it is impossible for them to withstand the sudden changes of our severe winters. All such trees should either be placed in a dry cellar with their roots packed in earth, or covered up with earth, root and branch, in some dry, sheltered place, and set out in the spring, when they will make a good growth and ripen up their wood sufficiently to bear the rigor of our winters. We do not believe that five per cent. of eastern grown trees, set out in the fall, in the north half of the State, have ever stood the test and come into bearing, and yet we have great faith in trees not too much stimulated, and thus protected the first winter, giving good satisfaction. In New York the growth is arrested by frost, and the unripened wood is thus gradually hardened by repeated light frosts, and when in the nursery, further protected by the snow covering. In many cases the nurserymen do not wait for frost, and the leaves are stripped off by hand, the trees taken up, packed in bales or boxes, and shipped West; to set these trees out in the open field, exposed to all the sudden changes of our porous soil, is sheer folly, as it is almost sure death to the tree. If it does not die on right, the heart wood becomes black and the tree at best is but short lived. Such has been and continues to be the history of tree-planting where eastern trees are used. On the other hand, we have had good success with eastern grown trees by protecting them the first winter. We, therefore, again urge all persons dealing in eastern grown trees to take this precaution. To a large extent we are yet dependent upon the East for trees, and more especially of dwarf and standard pears, and as we cannot afford to lose any, we must profit by past experience and not keep on in the old beaten path, which is lined with dead trees and bankrupt fruit tree dealers. A Codlin, Winesap or Willow Twig is just as valuable grown in New York as on the prairie, if we will protect it the first winter, so

that it makes a healthy growth the following season; it will thus be sufficiently acclimated to stand the rigors of the climate on an equality with those grown at home.

We make no indiscriminate warfare upon the eastern trees, for we would have them all grow and do well, as we have none to spare, and if trees can be had from the East cheaper than at home, we have nothing to say; but while we say plant trees, we say that do it in such a way that they will live and prove valuable, for it is no pleasure to see a hundred or two of dead trees decorating the grounds of some lover of good fruit. So much for the care of eastern grown trees. Now for the consideration of the best.

MODE OF PLANTING.

Shelter, aspect, low heads, selections of varieties, drainage and thorough culture, are the essentials that give an orchard its commercial value. At the same time we cannot ignore the mode of planting, though every person, whether he has set a tree or not, becomes indignant when any doubts are thrown upon his ability to properly set out a tree. If the ground is underdrained, the surface need not be thrown into ridges or lands, but if it is not thoroughly drained, the orchard should be placed in lands, the width of the rows say from twenty to twenty-four feet apart, and the line of trees should be on the ridge or centre of these lands, so that the water will not settle about their roots. In setting, dig the holes somewhat larger than the extent of the roots, and some inches deeper than the tree should set; make a miniature mound in this hole and where you intend the tree to rest; set the tree on this mound, and place the roots in their natural position; on these sprinkle fine earth, and if need be, place it carefully among the roots, with the fingers; after filling in, tread the fine earth among the roots, keeping the toes of your boots toward the tree; if the ground is dry, use a pail of water to settle the earth; if not, fill up with the moist earth level with the surface, and again tread down smooth. On this throw up a mound around the tree at least a foot high; pat this smooth with the back of the spade to prevent washing, and the work is done. If the tree has a head two to four feet high, it should be made to lean to the southwest, otherwise the winds from that quarter will lean them over to the northeast and allow the sun to scald the trunks. If the land is well drained, it matters little if the tree is set one or six inches lower than it grew in the nursery. On many of our trees we have ridged the earth up at least a foot, and they remain as vigorous as those set the same depth that they grew in the nursery. If trees are set on thin soil with a stiff clay below, it is death to set them deep, at the same time the roots of trees on a well drained clay-loam soil run deeper of their own accord, especially if the land has been worked deep with the plow or spade. If the ground is any way level we would ridge up against the trees. The mound placed around the tree will prevent it from heaving out by the winter frosts, being swayed over by the wind, or injured by early spring drouth, which, by the way,

is very destructive on fall planted trees. From a few experiments we are inclined to recommend this mound to all spring planted trees, to be removed in July or August and mulching to be applied in its place. So many thousand dollars are lost every year by careless planting, that we urge unusual care in its management.

SHELTER AND ASPECT.

A level surface is the worst place for an orchard. An eastern aspect is the best, but it matters little if the slope is sharply to the west, if it is protected by a belt of trees to break off the winds. We know an orchard that produces good crops with a sharp western aspect; but a belt of locust trees, two or three rods wide and thirty feet high, break off the winds and the trees produce good crops, and make a healthy growth. Shelter, therefore, is of the highest value. The old orchards that have produced annual crops for the last twenty to thirty years along the east side of the Okaw and Embarrass rivers, are all sheltered on the south, east and north. The most of them are in the nocks of the timber belts, looking out to the east or northeast, while those on the west side of the timber, and exposed to the prevailing winds, are uncertain in their returns. Orchards may be too closely sheltered. They must have plenty of air, but not the full sweep of it as it pours out from the northwest.

LOW HEADS AND VARIETIES.

We are fully satisfied that it is a great error to prune up our trees, and henceforth our planting shall be of trees with heads not exceeding a foot from the ground. Such trees make a better growth, bear correspondingly young, are not so liable to have the fruit blown off by heavy winds, are easier gathered, the trees require less care, need no staking up, are never injured by the sun scalding their trunks, are less trouble to cultivate, from the fact that the branches so completely shade the ground under them that no weeds can grow, and the falling leaves form a mulch that protects the roots. The narrow strip that grows less year after year can be cultivated without endangering the roots, as in a deeply cultivated soil they run below the plow, though one would not plow over two and a half inches deep, just enough to keep the soil open to admit the air to the soil below. For the first five or six years the orchard can be planted to corn, beans, and other hoed crops, but never sown to small grains. Some orchardists sow buckwheat for the purpose of keeping the soil open, but the crop is not harvested. Time has not, as yet, verified its value, though we see no objection to it. With low headed trees, from half to two-thirds of the labor of cultivating the orchard is saved, and the danger of barking the trunks by the whistle-trees and harrow obviated. It will require time to get our people to forsake the old beaten paths and adopt new and useful modes in their stead. A humbug like the *Morus Multicaulis*, China tree corn, or the Rhohan potato, will travel like wild fire, and spread over the land like the locusts of Egypt, but a useful improve-

ment travels slowly, but surely, to its destination.

To Dr. Pennington, of Whiteside county, is due the first extended demonstration of low-headed orchard planting, but unfortunately many of the Doctor's varieties were unsuited to the climate, and during the severe winter of '54-'55, were seriously injured. Much of this loss was due to the want of shelter and the planting on low or land running through the depressions of the prairie swells. Hundreds of acres of orchards have since been planted on this plan, and in most cases many of these tender varieties have been discarded. These orchards will soon begin to tell on the supplies of fruit in our northern markets. To say what varieties do not do well on the prairies, would not only require a large amount of space, but involve difference of opinion, and we can benefit our readers to a greater extent to inform them of such varieties whose value, like the virtue of *Cæsar's wife*, is above suspicion. Among the summer varieties, there is no one of greater value than the *Keswick Codlin*, the famous cooking apple of England. The tree is hardy, a rapid grower, and remarkably early coming into bearing. Two year old trees headed at the ground will often produce a bushel of apples the fourth year after planting. The fruit is large and always fair; is the first ready for tarts and pies, and ripens gradually, lasting until late in September. It is, also, a good drying apple. It has a clear, sharp acid, cooks easy, and from its uniform freedom from insects, is a great favorite. This may well be called the great cooking apple of July, August and September.

Early Pennock is another variety that has stood the test; is valuable both for eating and cooking. Benoni and Dutchess of Oldenburg, will also be found valuable. Williams' Favorite has done very well thus far with us, but we are not prepared to put it in our select list. Holland Pippin, with shelter, is too valuable to be left out, its large size, fine, smooth, round form and clear acid, make it highly valuable for cooking and drying. Sumner Queen gives fair promise, and those who plant largely would do well to include it in their list. In the list of fall and early winter sorts, Farmeuse stands unrivaled for its beauty, great productiveness and fine flavor. For the train boy and the fruit stand, it has no equal in its season. Downing ruined the reputation of his fruit for the West, by saying that "it is especially valuable in northern latitudes," more especially Canada, where it is supposed to have originated. Winesap, Willow Twig, Yellow Bellflower Domine and Raules' Janet, have all proved to be of the first value. In our own grounds we have found Stannard, a fruit originating some thirty years since in Erie county, New York, to be of no small value; in fact, we know of no winter apple that will pay a better profit than this, and we are now planting it largely. It is in use from December to April, is rather coarse grained, valuable for cooking and tolerable for eating; the certainty of the crop and the immense yield of large, fair-sized sound fruit, give it no second position in the list of profitable apples for market. The tree is a sprawling, rapid grower, and not popular with nurserymen or

buyers, who fancy straight whip-like sticks, instead of good reliable sorts. Persons sending us stamps to pay the postage, shall receive scions of this variety. We have three trees of this sort in the orchard at Leyden, set fourteen years since, and have borne heavy annual crops for the past eleven years, which we cannot say of any other variety except the Codlin, and had we to choose one summer and winter variety only, we would select these two without hesitation. The trees have stood all sorts of exposure, and one of them on low, rather spongy ground, and yet they show no signs of failure. Of course, there are better apples, but we have long since learned that the best was not the most profitable.

DRAINAGE.

Unless an orchard stands on well drained land, it will be short lived and unproductive. The most thorough drainage is by the use of tile, though ridging up in narrow lands will answer a very good purpose. In all heavy clay soils, tile drainage will prove the most profitable. Tile can now be had in quantity and of good quality. Its cost, with drains three feet deep, will be from twenty-five to forty dollars per acre, depending upon the size and number of the main drains, and the distance of hauling the tile.

OF CULTURE.

The orchard should be kept cultivated, or not more than the narrow strips between the trees seeded to clover for one or two years, and then turned under. Timothy and blue grass should be kept out at all times; no small grains should be sown. We are now planting twenty feet apart each way, and after the first five or six years, no crops will be cultivated, with a view to be taken from the ground. Clover and buckwheat will alone be admissible, and those for mulching.

DURABILITY OF ORCHARDS.

We do not think an orchard is as long lived as generally supposed. The orchard of Mr. Sadorus, noticed in our last, is but thirty-one years and is fast going to decay. The largest trees are twenty inches in diameter, many are dead, and it is probable that the next four or five years will finish them. In one orchard in Adams county, set seventeen years since, the trees are a foot in diameter, and some of them show signs of having reached a respectable age. Fifteen years more, we think, will close them out. With low heads we think they will come into full bearing at least three years sooner, and probably last longer, as the sun cannot scald their trunks, or the winds disturb the fibres of their wood.

FLAX-COTTON CALICO.—The *Providence Journal* says: "We have latterly seen a specimen of prints made from a mixture of 25 per cent. cotton, and 75 per cent. flax. It shows to decided advantage in texture, color, and general appearance by the side of the cloth made wholly of cotton. The raw material can be afforded at seven cents a pound."

[From the Philadelphia Bulletin.]

Trial of a Steam Plow—A Great Agricultural Improvement.

We were invited yesterday to witness the operation of a steam plow which has been brought to the vicinity of this city, and set to work on the farm of Mr. Alburger, near the Lazeretto. The plow is an English invention, and at the latest dates there were from eighty to one hundred of them at work in the fair fields of "merrie England." The patentee is Mr. John Fowler, and the agent and active manager is Mr. R. W. Eddison, who politely afforded us every facility for inspecting the operations of the machine.

The plow is really a portable steam engine, the plow and portable anchor all in one. The steam engine resembles a railroad locomotive, and is of twelve horse power. It can be propelled over common roads at the rate of three miles an hour with perfect safety. It also can be used for threshing, and for any other farm work which it would pay to use a steam engine for. The anchor is an iron frame work, so arranged that it takes a firm hold of the soil, while around a wheel connected with it, revolves a wire rope which draws the plow. The plow is a piece of machinery so intricate that we will not attempt to describe it. Suffice it to say, that it is so arranged that four, six, or eight furrows may be made at one operation, or the plow may be so arranged as to plow, drill and harrow all at once.

When in motion the anchor is firmly set in the ground at one end of the field, while the steam engine stands at the other. The wire rope runs between the anchor and engine, and is attached to the plow; the rope is kept off the ground by pulleys set in iron frames, which are distributed between the engine and anchor. The plow is fairly started, the guider takes his seat upon it, and the engine begins its work. Four or more beautiful furrows are at once cut, and without deviation, the instrument keeps straight on until the anchor is reached. The plow being arranged with double reverse shares, is then placed in the right position, without loss of time, and the engine again starts. The furrows are thrown exactly as before, though the plow is moving in the contrary direction. This process is repeated, and the anchor is shifted until the whole field is plowed over. In the combined operations of plowing, drilling and harrowing, the apparatus works both up and down the field, as we have described, the machinery being changed by a simple movement, when the plow reaches the anchor at one end of the field, or the engine at the other. In this manner the plow can go over three acres per hour, though the lightness or heaviness of the soil, of course, makes its execution vary somewhat.

The cost of the entire apparatus, plow, anchor and twelve horse engine, will be between \$3,000 and \$4,000. Two men and three boys are required to work the apparatus properly when employed in plowing, drilling or harrowing, though when the engine is detached for sawing wood or threshing grain, a less number of "hands" will be required.

The plow was at work a short time yesterday, the soil on which it was worked being very light. About three acres were plowed over, and the experiment was pronounced satisfactory by a large number of agricultural gentlemen from this city and from other points in this vicinity. Among those present were the following committee from the New Castle County (Del.) Agricultural Society:

Charles J. Dupont, E. C. Stotsenburg, Samuel Canby, J. Morton Pennoek, Edward Webb and John Duncan. These gentlemen all seemed highly delighted with the working of the plow, and gave Mr. Eddison a cordial invitation to exhibit its powers at Wilmington. All the other farmers and agriculturally inclined gentlemen present, also expressed their cordial approbation of the working, and expressed the opinion that the patent would be a large fortune for some one.

The agent, Mr. Eddison, stated that some of the hands engaged in working the apparatus were "green," and that he was hardly satisfied with what he had done. He would, however, be in the vicinity of Philadelphia for some time yet, and he hoped to be able to show the community greater results than they had yet seen. The spectators, however, seemed perfectly satisfied with exhibition of the immense capacity of the plow and came away fully convinced that it was destined to work a revolution in agriculture wherever its merits became known.

Our readers will doubtless find it advertised, and we commend it to their attention as worthy the closest and most scientific attention and scrutiny. In England it has already passed through the ordeal, and is coming into use everywhere, and we cannot doubt that it will be found equally practical and useful on the soil of America.

—We give the above a place in our columns, not so much for any particular value, as to show how easy it is to humbug the press, or how careless they are in indorsing a thing that is useless. There are sufficient facts stated in the article, if the editor had known them, to show that this English invention is to go the way of its American cousins of the steam plow farming. We have shown in the current volume of the FARMER that steam plowing will never become general in these United States, and especially in the West, where it is claimed the country is adapted to its use.

It is true, in this plow the rising of sharp grades is overcome by stationary power, but this process is too slow and too costly to come into use. It is demonstrated that plowing by steam can be done, but that it can compete with animal power, is as far off to-day as when Fawkes first conceived the idea of his traction engine, which is now rusting down in sight of our window. We have no doubt that all present were pleased

with the quality of the work, but it is hardly possible that such men as are named would pronounce it a success. But even that would not enhance its value to us, for it is in the history of the steam plow that the shouts of the multitude have indorsed it again and again; that a committee of scientific mechanical gentlemen who stand high in the field of mechanism indorsed it in the most positive terms, yet no one among our large farmers has had sufficient faith in it to order one.

No general statement is going to induce people to believe that the steam plow is a success—nothing short of its actual demonstration in dollars and cents. It is possible that steam can be used to cut ditches, or draw the mole drains through our stiff clays, but beyond this you can count us an unbeliever.

Fawkes is now busy with the traction engine exhibited at Centralia and Decatur, and which is now at Decatur, in attempts at mole draining. If he can succeed in drawing the mole through the upland when the surface is dry, we shall have some hopes of his success in that direction.

The idea of cultivating our farms by steam is too utopian to have our best men throw away their money on it. English nabobs will doubtless run the gamut of its impracticability. They have money to spare, but the American farmer, who has to earn his money from his own acres, will be slow to invest. Our people are fond of cheap humbugs, but they do not take so kindly to those on so large a scale as that of the steam plow.

Ed.

EFFECT OF HUNGARIAN GRASS.—A gentleman from Will county relates to us the following as being the experience of one of his neighbors. Having grown and fed considerable of it to his stock the present season, several of the horses became stiffened and almost useless—one, a fine mare, died. Determined to know so far as possible what ailed her, he opened her and examined thoroughly, and discovered in her stomach a ball of *Hungarian grass seed*, weighing from seven to eight pounds, so hard that it was with much difficulty it could be broken apart.—Acting on this discovery, he gave his other horses a dose of castor oil, when very soon masses of seed were passed from them, apparently parts of such described balls, some pieces as large as eggs.

—The following notice was found posted on the bulletin of a Western Postoffice:

"Lost—a red kaf. He had a white spot on 1 of his legs. He was a she kaf. I will give three dollars to evribodi that will bring hym hum."

THE ILLINOIS FARMER.

BAILHACHE & BAKER.....PUBLISHERS.

M. L. DUNLAP, EDITOR.

SPRINGFIELD, NOVEMBER, 1861.

Editor's Table.

BROWN OCTOBER, with its wealth of food, its dreamy days and mellow sun, is again at hand, and the farmers are busy with the last garnering of the year. At this writing, (10th), the frost has not browned the forest stalks of the leafy garniture of the forest, but the ripening breath of autumn is busy, and the giant oaks, the maples, and other trees have pronounced the season of growth at a close, and their leaves are being painted with the rainbow hues, in which the forest loves to be arrayed before the frost king strips it of its leafy treasure. It was for autumn that the winter's frost crumbled down the glebe to make the soil friable; it was for autumn that the April showers swelled the germ and roused into life the dormant energies of the vegetable kingdom; it was for autumn that the genial days of spring brought out the flowers, that the sun might paint them in beauty before the fruit germ should appear to gladden the brow of labor; it was for autumn that Pomona rounded the orb-like apple, and kissed the cheek of the peach, with the glow of health and beauty; it was for the autumn flails that Ceres harvested the golden grain under the fierce heat of the August sun, and now, autumn, rich with the offerings of spring and summer, will soon pass her gifts over to the keeping of winter.

AN AGRICULTURAL COLLEGE. — An indefinite amount of twaddle has been printed and talked over in regard to the Agricultural Colleges—they have, like ten pins, been set up and as often knocked down, until the great mass of farmers have come to look upon the scheme as impracticable, and to-day we do not know of an institution of the kind that is in good running order. The most of these institutions have been gotten up by visionary schemers, most of them with philanthropic views, but upon a wrong basis. The idea of sending farmers' sons from home to labor on some fancy farm to learn the science of farming is all nonsense, broad cloth and kid gloves are so intimately connected with the idea of education, that it will not take kindly to linsey and denims, while stogas and over coats are voted at a discount, and labor a drudge.

We can attend agricultural lectures, study into the arena of nature, look at the various operations of farming, gardening and fruit growing, but do not ask us to lay aside our Sunday suit and dive into matters of fact, turning over of compost heaps, digging drains, pitching hay or sowing wheat, these we may do at home or have them done. All we want, is to know if the teachers of these institutions can show us a better mode in which to do those things than our fathers have taught us. The truth is, we do not attend these schools to go through a seven years apprenticeship of farming, but to polish up and perfect ourselves in special departments.

The man who teaches surveying does not take his scholars into the field, nor does the student of book-keeping handle the dollars and cents reported in his lessons, of what use, then, is it to the student to mix the compost himself? let him be shown how it is done, and the reason for it, and so through all the manipulations and progress of the art. If there are students that wish to work to aid them in paying a part or all of their expenses, give all such an opportunity of doing so, at the same price that is paid for the same amount of labor to other assistants, but when you compel students to do the work the charm is lost, and the school will dwindle down to a corporal's guard, not that they have a dislike to labor, but that they attend school to see and hear, and on their return home to apply in practical lessons those they have been taught.

We have long since seen the necessity of an agricultural department to some of our colleges, in which theoretical and practical agriculture can be taught upon the same footing with other studies. To do this, a farm, an orchard, and a

garden must of necessity be attached. They need not be on an extensive scale, in fact, should be limited to the usual size of our minimum farms, say eighty to a hundred acres, and on this farm the whole routine of farming should be conducted, not by the students, but by assistants who understand their business most thoroughly.

The University of Chicago, we understand, are about making, or have made arrangements to have an agricultural collegé, with a farm and its appliances, to be located at Cottage Hill, sixteen miles west of the city on the Chicago and Galena Railroad.

Whether the University is to be removed to Cottage Hill or separate building erected, we do not know, but this we do know, that the enterprise is in good hands, and that it will result in practical good to the agricultural interest. Prof. J. H. McChesney, the late State Geologist, is the most active in this good work. The land to be used we are well acquainted with, it is part of the farm of T. B. Bryan, and lies on the left bank of the Salt creek, or rather on the western slope of the divide between this creek and the river DesPlaines. The soil is prairie, and rests on the Niagara group of lime-stone which crops out at several points in the neighborhood, and is well selected for the purpose of testing crops and culture for prairie farming. The corporators of the institution are gentlemen of eminent practical ability, and we think they cannot fail of making the institution useful to the rising generation of farmers.

AUGUST SOWN WHEAT.—Our wheat sown August 12th has made a fine growth, and afforded a large amount of green feed. Stock of all kinds are so well pleased with it that they keep it well fed down. The ground having been rolled, the surface is in good condition to pasture close.

SORT OUT THE SMALL POTATOES.—At a late meeting of the New York Farmers' Club, Solon Robinson said that farmers would save one-fourth on their price by separating the large from the small potatoes before sending them to market. When mixed, the small potatoes only fill up the interstices and lessen the value of the whole, while, when separated, the large ones will bring a good price and the small ones sell for something for use by the bakers and otherwise. Or, if desired, the small ones could be kept at home, and are as good for family use, in most cases, as any.

CAN WE USE COAL FOR COOKING?—We say yes, most decidedly, yet we have considerable to say on the subject. Most people suppose that all Illinois coals are of the same quality, when the truth is, there is a wide difference in them. The out crop being more or less weathered, is of little value, and it is this quality that is used to a great extent. Then, some of it is filled with sulphur and calc spar, so intimately blended that its separation is out of the question; then, there are "horsebacks," largely charged with sulphur, iron and clay shale, with just enough of carbon to make one believe that it is coal, and often when the sulphur occurs in flakes, it is not excluded by the miner, and becomes mixed with the coal. For the past ten years we have used more or less of coal for cooking, and have gone through the whole list of Illinois coals. For the past three years, we have almost exclusively used coal from the "St. John" Mines, located in what is called the DuQuoin coal field, and some two miles north of the village of that name. This coal is equal in all respects and similar to the "Briar Hill" coal sold in Chicago, and of which we have used for some three or four years. It burns with a bright flame, leaves a light ash, but no clinkers, like most other Illinois coal. We have a good wood lot containing an abundance of maple and hickory, but we find the coal cheaper than to cut and haul the wood. In burning coal we use a coal stove, which is not adapted to the use of either wood or cobs, at the same time we have a first class wood stove, in which wood and cobs are used. In this we use up the chips and trimmings of fence posts, old broken posts, the tops of trees, cut for farm purposes, and cobs, but we cut no timber on purpose for wood. Much of the complaint of the use of coal, for cooking purposes comes from the use of that class of stoves "adapted to both wood and coal." Such a stove we would not have about us at any price. For the use of coal the flues in the stove must be larger than for wood, and also a draft hole to admit air on, as well as under the burning coal, that the combustion may be perfect, or what is called burning the crude gasses that would otherwise pass off with the smoke. The pipe must also be larger, not less than seven inches, to give a good draft.


All coal containing sulphur is very objectionable for cook stoves, as much of the gasses escape into the room, but as the sulphur which is found in all our coal mines in its various forms, in the St. John Mines is in bands, and easily

separated from the coal. The coal shipped may for all practical purposes be said to be free of this unpleasant ingredient.

As coal must be used to a large extent for domestic purposes, it is time that our farmers and villagers become accustomed to its economical use. Coal cook stoves should have their fire boxes small and well lined with fire brick. If too large, they consume too much coal; if of cast iron plates, they are burned out or warped. Persons like ourself, using both wood and coal, should have two stoves.

In the green-house we prefer the St. John coal to wood, though our flues are made for wood. With this coal they do not fill up with soot any more than with wood, and have the same periodical turns in *burning out as if wood* was used. We do not think there is any other Illinois coal possessing this quality. A fire made at nine o'clock in the evening in the green-house will require no looking after until late next morning, which is not the case when wood is used. For green-houses and graperies, it will, therefore, prove valuable, and we may well congratulate our nurserymen and grape growers upon a cheap fuel adapted to their wants. To the farmers and other residents along the line of the Illinois Central Railroad, this coal field is of no small value. A mixture of coal and cobs makes the best possible fire for the cook stove, the one can be had of an excellent quality and cheap, while the other is grown on the farm, or found at the steam shellers of the village. Coal should be kept under cover, as Illinois coal, in common with all other soft coal, will be more or less injured by exposure to the weather. Could we always have good well seasoned body wood, kept dry in a wood house, we could do very well, but instead, the good wife has to put up with green or water soaked wood, often half rotten, and is expected to get up her meals in time.

We always feel safe with coal, for with a supply of dry cobs for kindling, there is no trouble about the fire, and with such a steady fire, the bread is always well baked. Our vote is for good coal for the kitchen.

 A fellow advertised in Boston that for four shillings remitted he would send beautifully engraved portraits of George Washington and Benj. Franklin, and had the impudence to forward to his victims a three and one cent postage stamp!

—The kind of *beaux* that coquettes justly deserve—*Bo gus*!

GATES' EVAPORATOR VS. COOK'S—A PROPOSITION.—Not having had time to put up and operate one of our Fire Evaporators at the State Fair, in consequence of other and pressing demands upon our time, and as the cause has been attributed to a fear on our part to come in competition with Cook's Evaporator, we now propose to place our Patent Fire Evaporator in competition with Cook's at any time within thirty days from this date, and at any place within one hundred miles of Chicago, upon the following terms: Each competitor shall place one hundred dollars in the hands of a disinterested committee of five persons, to be appointed by the President of the State Agricultural Society of Illinois, to be awarded to the successful party.

The decision to be on the best quality of sirup made in the shortest time with the least labor and fuel. Fifteen days' notice being given of the time and place of meeting.

P. W. GATES & Co.

Chicago, September 14, 1861.

Had we no other evidence of the extent to which the culture of the sorghum has reached than the competition to supply evaporators, we should be content. Thus far Cook's Evaporator has taken the lead, and has gained such an extended popularity that it is an object to get up another that may be better in any respect.

Messrs. Gates & Co. have the sagacity to see this, and hence the challenge. Should they fail, they can well afford it, for an evaporator that its friends think approach that of Cook's will, of course, be considered valuable, and added to this an acceptance by Cook of the challenge is an acknowledgment of merit. We hope the trial will be made. It is possible that Gates & Co. may be beaten, if so, the people should know it. The facilities for skimming are better, but not having seen the fire applied to it, we cannot judge of its advantages. Cook's can be modified so as to correspond to that of Gates' in the facilities for skimming. Without the use of steam, we think it will be hard to beat the Cook's Evaporator. All the cast and sheet iron pans that we have seen fall far short of it. The steam evaporators, when manufacturing is done on a large scale, are doubtless the best and the cheapest—there is no danger in burning the sirup as in the case of a wood fire, for the steam will only heat to a certain degree. There is no one thing more certain than this, that sorghum is to supply the West with sirup, and possibly with sugar, though of the latter we are not very sanguine, though very many persons who have given the subject more attention than we have, think that sugar making will succeed. They argue that the cane has the elements of sugar in it, and that a mode to induce it to crystalize will soon be discovered.

It was a long time before it could be divested of the rank vegetable taste, but this has now become one of the simplest things possible. An acre of cane on each farm in the State will more than supply the population with good sirup, and if it will make sugar at a profit, one other acre will supply that now indispensable luxury.


BETTER WORK FOR LITTLE THAN BEG—We have no sympathy, says the *Genesee Farmer*, with those who, because they cannot get as high wages as they think they are entitled to, prefer to live in idleness than to work for low wages. Every honest man will surely prefer to work for nothing out his board and lodging than to beg. There are, however, many men—and women too—who seem to cherish the contrary opinion. The *Massachusetts Farmer*, under the heading, "A puzzle for Farmers," alludes to the matter as follows:

The prices charged for labor on the farm have been higher than any other article in the market. But now, since the hay and grain season are past, farmers cannot afford to pay such high prices for the remainder of the season—and they are not disposed to pay such prices when the busy season is over—for all articles of produce are low and money is not plenty.

Vast numbers of able bodied men are now out of business and strolling through the land, "walking up and down in it." They daily pass through the highways and inquire the way to the poor house, for a night's keeping—and they pass from town to town and tell their stories to benevolent people who are strangers to them.

These strollers and beggars are seemingly as strong and healthy as farm laborers, and ought not to be encouraged in begging. Their plea is that they can obtain no employment. But when invited to work, they demand such high wages that farmers cannot afford to employ them.

Many of these men might earn ten dollars a month, and be boarded and lodged. But they would not submit to such degradation as this—they prefer begging from town to town, and imposing on honest people. Farmers would like to make permanent improvements at this season of the year, provided they could hire at a fair rate. But they cannot afford to pay high prices when the busy season is over;

 The *Polynesian*, a paper published in Honolulu, Sandwich Islands, warns its readers against the barbarism and shocking state of society in the United States, and contrasts it with the peaceful life of the Sandwich Islanders.

—A cobbler's sole support—in shoe rents he finds his soul!

TO SCHOOL TEACHERS.—We would call the attention of school teachers to the following law and circular from the Superintendent of Public Instruction:

"The State Superintendent of Public Instruction shall also be, and he is hereby authorized to grant and issue State certificates of eminent qualifications as teachers, to such persons as may be found worthy to receive the same, upon due examination, by himself or others whom he shall appoint for that purpose, and who shall exhibit satisfactory evidence of practical experience and success in teaching. Said State certificates shall supersede the necessity of any and all other examinations, and shall be of perpetual validity in every county and school district in the State; and the fee for each of such certificates shall be five dollars. But a State certificate may be cancelled by the State Superintendent upon proof of immoral or unprofessional conduct."

"The next examination under the above provision of law will be held at the city of Bloomington on Thursday, Friday and Saturday, the 19th, 20th and 21st of December, 1861 commencing promptly at 10 o'clock a. m., Thursday the 19th. A committee of acting teachers from different parts of the State, selected for their long experience, tried ability, and sound judgment, will assist me in the examination."

FARM HOUSES.—A correspondent of the *New Hampshire Journal of Agriculture* says:

In passing through our farming towns, the observant traveler will be often painfully impressed with the untidy appearance of the farmers' premises. Bleak, barren and unsightly, with hardly a tree shrub or flower to indicate the presence of civilized human beings, who would wonder if such were to be his dwelling place at the anxiety of the farmer to "sell out" and try his fortunes in some more lucrative business? Contentment in such a place would prove him something more or less than human.

Why is it that farmers, as a class, are so careless of appearances? If, as I believe, the love of the beautiful is implanted in every human breast, why should not the farmer cultivate it? If forms of beauty delight and attract us—if they refine and elevate us—leading us upward from a merely sensual to a more spiritual life, why should we not surround our dwellings with objects which will be a delight to the eye rather than the reverse.

The farmer's life is too often one of mere drudgery, when, were he to improve the advantage of his position, it might be one of continual delight. The removal of unsightly objects from the vicinity of the dwelling, filling the yards with flowers, would cost but a trifle, either of time or money, and would add materially to the happiness of the household.

—A witty philosopher says: "Some men's mouths seem to be like the dikes of Holland—made to keep out water."

HOW TO TAKE MEDICINE WITHOUT TASTING IT. Take a firm hold of your nose, so that it would be impossible for you to breathe through it; take your medicine and some water, or whatever you like, to clear your mouth, and after a little time loose your nose. It is not a very graceful attitude in which to be seen, but we can assure you it is a very easy way of taking disagreeable medicine.

Another way: Hold some vinegar or lemon juice in your mouth for a moment or two, or rinse the mouth with strong alum water.

A friend at our elbow says, take homœopathic medicine and you will not be required to hold your nose or take vinegar. Or, if this does not suit you, use an abundance of ripe fruit and vegetables, and nine times out of ten you will need no medicine.

PRESERVING CIDER.—J. C. S., of Canada West, asks if any of your readers used the sulphite of lime for preserving cider? In answer, I would say, I prepared two barrels with sulphite of lime, according to printed directions accompanying each bottle, and am satisfied it is all it is recommended to be; and for further proof, I have the pleasure to refer to the editor of the *Genesee Farmer*, as he had a taste during the latter part of the February following of the cider thus prepared by me.—D., *Gates*.

The cider referred to by our correspondent was excellent. There can be no doubt about the efficiency of sulphite of lime in preserving cider.—*Genesee Farmer*.

MEAT FOR HENS.—It should be kept in mind that animal food, at all times of the year is a stimulus to hens to lay. When they have abundant range they gather insects of various kinds; but even then, and especially when cut off by confinement, or by cold weather, from this source of animal food, it is well to give them waste offal from a kitchen, bits of fresh meat, &c. Scrap cake from the hog killing and oil pressing establishments, is a cheap source of supply. Fresh bones broken into small pieces are greedily devoured, and much relished by hens at all times, and also promote their laying. These furnish the materials of which egg shells are made, and without supplying something of the kind, it is as unreasonable to expect the hens to furnish their manufactures, as it was in old time to demand bricks to be made without straw.—*American Agriculturist*.

—A fellow having imbibed rather freely, took it into his head that he could fly, and to get a good position, ascended a sign post and started. He was questioned the next day as to how he liked flying. "Oh!" said he, "it's nothing to fly, the lighting is the hardest part of the operation."

FARMER'S ADVOCATE, CHICAGO.—This journal is now edited by Messrs. Bonham & Bodley, and contains a large amount of valuable reading. It is now in its fourth year. Its early history, towards one of its contemporaries, was not the most genial, but having changed hands and purified itself of the evil, has become a well conducted journal, and as such, we welcome it into the field of agricultural progress. We would prefer to see one agricultural journal published in the commercial emporium of the West, but if our friends choose to keep house separate, we must e'en be content.

The *Advocate* is a weekly, and besides its agricultural department, gives a large amount of family reading, embracing the current news of the day. This West of ours is a large country, and half a dozen agricultural journals ought to be well patronized. For our part, we claim no special monopoly—there is room enough in our pool of Siloam for all to wade in.

THE TEA TREE OF OREGON.—We are in receipt of a package of seeds of the above tree from Simeon Francis, Esq., editor of the *Oregon Farmer*, published at Portland, Oregon. Mr. F. says, "In an excursion into the country a few days since, I found a very fine *Ceanothus*, (the tea tree of this country) from which I gathered a few seed, which I send to you. The *Ceanothus* belongs to the class of small trees, grows about as high as the *Rhus Cotonus*; it is an evergreen, its leaves are thick and of the size of small magnolia leaves—giving out a strong and pleasant balsamic odor in winter; in spring, the tree is covered with long racemes of white flowers, in shape like the lilac. I suppose, following nature, the seed should be planted in the fall. I do not recollect having seen the tree in any collection East."

We shall endeavor to grow trees from these seeds, but we have many doubts of its proving hardy with us on the prairie.

GYPSUM OR PLASTER.—The Grand Rapids Plaster Company, of Michigan, had on exhibition samples of their plaster at the State Fair. But little, as yet, is known of the value of this plaster on our prairie soils, but we think it well worth a trial. Wm. Hovey, of Grand Rapids, Mich., is the general agent for its sale. We are not aware that it is for sale in Chicago in any quantity. We intend giving it a trial next season. On clover and wheat it ought to be valuable.

VOLUME FOURTH OF THE TRANSACTIONS OF THE ILLINOIS STATE AGRICULTURAL SOCIETY.—The publication of this volume has been delayed a little beyond the usual time by the pressure of the work in the office of the public printer. It is now, however, about ready for the binder, and will soon be distributed to the various associations in the State entitled to receive it.

From our knowledge of its contents, the style of the letter press, and illustrations, we do not hesitate to say in advance, it will be a valuable addition to every agricultural library, and in every way creditable to the Society, by whom the materials have been collected, and to the printers and engravers who have executed the work.

We shall notice the contents more in detail in a future number.

WILL IT PAY TO UNDERDRAIN?—James Fitch, of Springport, Cayuga county, New York, has for some years paid special attention to underdraining. The editor of the *Country Gentleman* recently visited him, and inquired the amount of benefit he had derived from the operation. Pointing to a field that was drained two years ago, and from which a crop of corn and barley had since been taken, he promptly replied, "I have received my pay already in the increase of these two crops."

HOG CHOLERA —The Petersburg and Jacksonville papers complain very much of the ravages of hog cholera in Menard and Morgan counties. One man in Menard county lost seven hundred, another five hundred, another four hundred, and so on. The *Menard Axis* thinks that at least ten thousand have died of the disease in that county.

The *Jacksonville Journal* tells a similar story in relation to Morgan county. No reliable remedy is known for the disease.

THE FRENCH VINTAGE.—The vintage of France will this year be magnificent. It is now being carried on with great activity in the Southern provinces and in Burgundy. Everywhere the grapes are fine, there being very few that have not ripened. No doubt is entertained that in all parts of the country the wine will be abundant and of very superior quality; there seems, therefore, to be some truth in the supposition that comet years are favorable to the cultivation of the grape.

HUMBUGS AT A DISCOUNT.—What with the war fever and tight times, even cheap humbugs are at a discount. Lottery swindles, bogus jewelry, dollar receipts, and twenty-five cent packages of new squashes are nearly out of date. We are almost dead of *ennui* in this line. Can't some one invent something of the kind just to keep the system alive? Where is Crandle and his wonderful corn? Where is the honey blade grass man, and the whole army of ten thousand of these graceless scamps? We suspect they have all to a man turned army contractors.

PREMIUM LIST OF THE STATE FAIR.—This list is now ready for delivery. Address J. P. Reynolds, Secretary of State Agricultural Society, Springfield, Ills.

— A contemporary, noticing the appointment of a friend as post master, says: "If he attends to the males as well as he does to the females, he will make a very efficient officer."

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 20,000 Mahaleb " "
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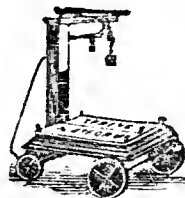
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ENLARGE YOUR CLUB.—Will not the friends of the ILLINOIS FARMER inquire how many copies of the FARMER are taken at their respective offices, and pass around among those who ought to have their names added to the list? Our terms are so low to clubs of ten and twenty that we ought to have one or the other made up at every office in the State, and at every office in Central Illinois, one of twenty or more. Will our friends, and the friends of practical agriculture see to it, and thus lay us under renewed obligations?

TO SINGLE SUBSCRIBERS.—You receive the only copy of the FARMER that goes to your post office. Can you not send one, two, three or more new subscribers, without any trouble? Try. Sample numbers, &c., sent free.

DRAFTS.—Those remitting us large amounts of money, will please send us drafts on Springfield or Chicago, less the exchange. If you send cash in a letter, be sure that is well sealed and well directed, to Bailhache & Baker, Springfield, Illinois.

THE FARMER AS A PRESENT.—Any of our subscribers who wish to make a present of the ILLINOIS FARMER for 1861, can have it at the lowest club rates, when sent out of the State. For fifty cents you can treat your eastern friends to a western agricultural paper. In no way can you invest that amount to so good advantage to emigration.


SEND NOW.—Any person who remits pay for a club of ten or fifteen, or any other number at the specified rates for such clubs, can afterwards add to the clubs, and take advantage of the reduction. Thus a person sending us five subscribers and three dollars, can afterwards send us three dollars more and receive six copies.


TO THE CASUAL READER.—This and other numbers of the ILLINOIS FARMER will be sent to many persons who now see it for the first time. Will they not examine it, and if they like it, subscribe for it, and ask their neighbors to subscribe? Sample numbers, prospectuses, etc., sent free to all applicants. See terms elsewhere.


HOW TO OBTAIN SUBSCRIBERS.—The best way is to send for sample numbers. Any young man by canvassing his neighborhood, can easily make up a club of five, ten or twenty, but no time should be lost in doing so, for your neighbors


may send east for their paper which: though valuable there, is much less so here, the difference of soil and climate putting them out of their reckoning when attempting to teach us western farming.

HOW TO HELP.—The friends of the ILLINOIS FARMER will find a prospectus in another column. We desire to suggest a few ways in which they can use it to advantage. 1. Show the FARMER to those who are unacquainted with it, and tell them what you think of it. 2. Send for prospectuses, and put them into the hands of those who will use them, and place posters where farmers will see them. 3. Get postmasters interested. They see everybody, and are efficient workers. 4. Send us the names of persons in your town to whom we can send prospectuses and sample numbers. 5. Begin *now*, before the agents of eastern papers get up their clubs. This last hint is especially important. Let us hear from you soon. See terms elsewhere.

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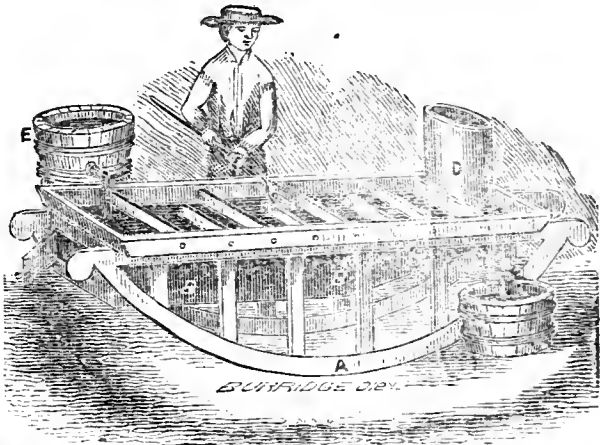
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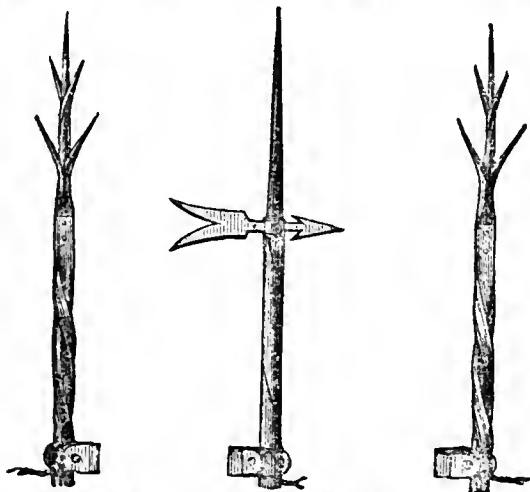
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AND IS

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THE ILLINOIS FARMER.

VOL. VI.

SPRINGFIELD, DECEMBER 1861.

NO. 12.

December.

From out the valley of autumn we now commence to ascend the rugged slopes of winter; the music of the thresher is no longer heard, the vegetables are housed, and the merry huskers are busy with the rustling leaves of the golden corn, the sharp frost has crisped up the grass, and the cattle browse the blades of the husked corn, or lay snugly under the lea of some kindly shelter. But a few days and the year 1861 will have passed away and taken its place on the historic page, where it will occupy a broad and interesting space. It is said that revolutions never go backwards—of this we have our doubts. If they do not, they make some wonderful somersaults.

In the Northwest, corn has essayed to be king, and a persistent effort has been made to give him the patent of nobility, but up comes the oil wells, and the kerosine throws out her floods of light more brilliant and fascinating than fluid or camphene; lager beer has usurped the domain of whisky, and rye is setting up on its own account. Thus King Corn will be compelled to divide the kingdom with other products of the farm, and to assume less important dimensions.

We are in the midst of a political revolution that will make vast changes in the great staples of the West, and it is important that we properly appreciate these material changes, and be prepared to act accordingly.

Corn, from several causes, is no longer the best paying crop, and other products must in part be substituted. Sorghum has become one of the necessities to the western

farmer, and next year will see thousands of acres of cotton planted; more wheat, more flax, more tobacco, and everywhere less corn. Thus in making these changes from the regular routine of farming, we must study anew. Those who plant cotton should do it understandingly; those who grow large fields of sorghum must make free use of figures to equalize the machinery to the product, or the profits may come up unbidden on the wrong side of the ledger. Those who sow flax should learn its habits, and those who sow more wheat will do well to select the best variety of seed, and consult the proper time of sowing. Those who plant less corn should carefully consider what other crop is best suited to their soils, the condition of the market and their facilities for its growth.

These subjects shall engage our earnest attention in the early numbers of the *FARMER* for the incoming year. We must learn to grapple with this new condition of things and become master of the situation; for years there has not been so great an occasion to study the markets, the various products of the field, the garden and the orchard, as now, for within the past generation there has not been such a revolution in the products of rural labor.

Cotton, once the accompaniment of every homestead in Central and Southern Illinois, within the last thirty years, is again to take its place in the list of field crops; thousands of acres will present their rich blossoms to greet the first zephyr of summer, and the August sun shall open out the downy staple, offering the first picking of the season to the hand of free labor. Flax, for its seed

and valuable fiber, must take its place on the prairie farms. Corn shall not be fully dethroned, but held in check by the flanking cohorts of other valuable staples—a mixed husbandry, a division of labor, distributing it more evenly throughout the year, will be the result of all this change.

Spring Wheat.

We have from time to time during the past dozen years, endeavored to impress upon our growers of spring wheat the necessity of early sowing. This year the crop is light at the north part of the State and in Wisconsin, in fact, throughout the whole spring wheat region of the Northwest. Upon inquiry, we find two reasons for it, or perhaps three are alleged. The one that we consider the most serious was the late sowing. There is a general principle that no seed should be put in the ground unless the land is in good order, in most cases, we assent to this, for with most crops the time of planting is sufficiently extended to accomplish this, as in the case of corn, we can plant in this latitude from the 25th of April to the 10th of June, and in the case of sod corn, ten days later; this gives a range of nearly forty days, and during this time the land will be in good order. Potatoes have fully the same range. Oats can be sown for a month, and we might go on with other crops in the same way, but when we come to spring wheat, we are brought to a sudden stand. In the latitude of 43° to 60°, the case is different; the season of growth is longer, and the ripening does not take place until the last of August or first of September, when the heated term is over, and a good crop is more certain, while with us the crop must be matured before the hot weather of summer sets in, or the grain will suffer with rust. It is, therefore, absolutely necessary to success that it be sown early, but in case of a wet spring like the past, it is not possible to have the land in good order in time to sow as early

as desirable, and the question comes up, shall we sow in the mud? We answer without any hesitation,

SOW IN THE MUD,

don't wait, if the season is late, sow as soon as the frost gets out, two or three inches at the surface, don't mind the mud, for the subsequent freezing and thawing will pulverize the surface and make it mellow and as friable as you could desire; so soon as the ground is sufficiently dry to roll, put on the roller without delay. Should the weather come off wet, you may not be able to roll for some time; if the grain gets six inches high, do not be alarmed, put on the roller, it gives it a wonderful start.

A few days since, we were on several spring wheat farms, and found the yield from ten to fourteen bushels to the acre, and in one case twenty bushels. Upon asking the reason for this extra yield over his neighbors, his answer was, "This is MUD WHEAT." He had sown it in the mud, as the frost was coming out, while his neighbors were three weeks later, waiting for the land to get dry. The result is six to eight bushels per acre against them. Soon after the frost gets out of the ground, the heavy spring rains set in, which delays planting and sowing. In the spring of 1860 these did not occur until after most of the sowing was done, hence the crop was got in unusually early, and a large was the consequence. If any person will take the trouble to investigate the yield of wheat among their neighbors they will find early fall plowing and early sowing connected with the best crops.

Mr. S. W. Arnold, of Courtland, DeKalb county, who is one of the most successful growers of spring wheat, plows his land as soon as the grain is taken off, not even waiting until the whole crop is stacked. We believe that spring wheat can be grown in all parts of the State if properly put in.

Experience is a dear school, but a valuable one if we but improve the lessons. In the first efforts at growing spring wheat on

the prairie, the failures were the rule and good crops the exception. Spring plowing and late sowing was the cause of the numerous failures, but now many farmers count upon a crop of spring wheat with as much certainty as that of corn, these always plow early in the fall and sow early in the spring. Corn land, free of weeds will need no plowing, but can be sown directly on the stubble; this must be cut low, or it will be difficult to harrow it in. Those intending to sow spring wheat should lose no time in looking after the plowing.

Treatment of Scratches.

The *Rural New Yorker* gives the following in reply to a correspondent:

"We give several modes, either of which he can test to his own satisfaction: In its early stages, diet, cleanliness, and ventilation require the attention of the groom. When the heels are swollen and hot, apply a poultice of slippery elm, (powdered) $\frac{1}{2}$ pound; fine salt, 2 ounces. Mix with hot water, and when cool, spread a portion on cotton cloth and bind. If the horse is fat, a mild cathartic, consisting of aloes, 4 drachms; gentian, 2 drachms; ginger, 1 drachm—all powdered—may be administered. If, on the other hand the horse be poor, use no medicine, but allow a generous diet.

"Prof. Morton, of the Royal Veterinary College, recommends the following: Equal parts of vinegar, linseed oil, and turpentine. Wash the heels with lukewarm water and castile soap, and after wiping dry, apply the mixture.

"John Johnston gave his manner of treatment in the *Rural* for March, 1860, and we reproduce it. Mr. J. says: Take sugar of lead and hog's lard, and make a salve. Wash the legs of the horse clean, and when perfectly dry, rub in the salve. Keep the horse out of the mud for a few days, using the salve occasionally, and it will soon effect a cure. It appears to me absurd to think of putting anything down the throat of a horse to cure scratches. * * * Before I got my yards perfectly dry, I was greatly troubled with scratches in the legs of my cattle, in soft weather, in fall or early winter. I have had a dozen or more at once, with swelled legs and scratches, a hot fever, and greatly lame. Washing and fomenting the legs with hot water, using the sugar of lead and lard salve, and keeping in dry place, soon effect a cure. Wash off the mud from the horse's legs when he comes in the stable, never let dry on, and a fig for scratches. Prevention is better than cure.

"A Toledo, Ohio, correspondent of the *Rural* says any person having a horse troubled with the scratches, will find, by taking a soft or fresh corn-

cob, and using warm dish water, or warm water and castile soap, (I prefer the former), and rubbing the affected part with the cob, dipping it frequently in the water, until it has the scruff all off and perfectly clean, then drying it with a cloth and applying the following salve, rubbing it well, that it will take but a few greasings until the horse is perfectly cured. With a case-knife, scrape from the outside of the iron pots used for cooking the soot or black that is on them, and mix tallow with it until it forms a good salve, or paste, and rub the scratches with it, after being cleansed, three or four times, or even six times, if necessary. The horse should be kept in the stable, or out of the mud, until he is cured, or nearly so.

"Another correspondent, residing at Lockport, N. Y., possessed of what he claims as a simple preventive and cure, pens it. It is as follows: When the horse comes in at night, his legs should be washed clean, and rubbed as dry as may be, then apply good vinegar, rubbing it well to the skin. Two applications a day are sufficient. I have always found it a sure preventive and a certain cure. If the legs have become cracked and sore, apply the vinegar freely, and add a piece of copperas, the size of a common hickory nut, to a quart of vinegar.

NEWSPAPER BLANKETS.—Our readers may remember the item which ran through the newspapers several months ago, to the effect that a newspaper laid between the bedclothes added greatly to the warmth of the covering. We attached little weight to this statement, but intelligent persons inform us that it is really true, and that a newspaper under the counterpane or under the jacket is really very effective in keeping the body comfortable.—The texture of the paper is so close that it both keeps out the cold air and keeps in the bodily warmth better than cloth.

"ANY OTHER MAN."—Whenever a slang phrase becomes extensively popular, a score of geniuses set themselves to work for the purpose of ascertaining its origin. One of these archæologists devoted his attention to the Scriptures, in which, whatever is worth finding, is sure to be discovered, and ascertained that the starting point of the phrase is in the 17th verse of the 16th chapter of Judges, where Delilah was coaxing Samson for the secret of his great strength. He divulged as follows: "If I be shaven, then my strength will go from me, and I shall become weak, and be like 'any other man.'" Bully for Samson.

—A pickpocket is said to have been doing a good business on the lines of railroad out West, by going into a car, refusing to pay his fare, and picking the conductor's pocket as he is putting him off.

Dwarfs in General, and the Dwarf Apple, Pear, Cherry and Plum in Particular.

In the last number of the FARMER, we give a chapter from the *Chicago Tribune* on orchard culture. The following we prepared as a continuation of the same subject, for the same paper, which we transfer to the FARMER for the purpose of making up a record for the future. Ed.

In our last we gave the reason why so many thousands of trees set in the orchard had failed to grow and produce fruit, and so universal and constant has been this loss, that most people have come to the conclusion that fruit would not do well on the prairies, and that some new mode or new varieties must be resorted to, to make up the deficiency. Dwarfing was offered as the panacea, and directly our eastern philanthropists got up immense stocks of dwarf apples, pears, cherries and plums. These were duly sent throughout the country, and everybody that owned a garden spot was to grow rich with the immense crops of fruit that would be produced on their dwarf trees. Occasionally an individual tree made wonderful returns, perhaps three per cent. of the whole number. Reports were made of these cases, and soon nothing would do but dwarfs—dwarfs for the fruit garden, dwarfs for the lawn, and dwarfs for the orchard. Now, what is the result of all this? Has the amount of fruit increased in proportion to the dwarfs planted, over standard trees? If we take into consideration the extra cost, we do not think there has been any advance. It is true that these dwarf trees, by receiving extra care, have more of them survived. Yet only a small per cent. of the dwarf pears have produced fruit, a less number of apples, while the cherry has proved a decided failure, and the bad management of the plum has given it no advantage. To be a little more specific, we will examine each in its turn, and see them as individual varieties. First, then, of the

DWARF APPLE.

For the past two years, the writer has given much of his time to the study of fruit culture in all its various departments. In this cause he has visited nearly all parts of the State. The uniform courtesy extended to him by railroad managers, has enabled him to give the subject his earnest attention at a trifling outlay beyond the time necessarily devoted to the examination, and it is probable that no other person has made so extended a personal examination on this subject. So much, by way of explanation, for what we may say on this subject, and how we have arrived at the conclusion, so counter to the present popular idea, in regard to the value of dwarf fruit trees. As a member of the "Farm Committee," we traveled some two thousand miles, and examined a large number of orchards and gardens, and conversed with hundreds of people interested in fruit culture, and the almost universal answer in regard to the dwarfs was that they had disappointed their expectations. In the

garden of Robert Douglas of Waukegan, the dwarf apple had given good satisfaction; a few trees on the grounds of C. E. Peck, of Winetka, and in the garden of D. F. Kinny, of Rock Island, all on timber land, were the only trees that we found at all satisfactory, and nowhere on the prairie did we find a single tree that even presented a moderate crop. We saw hundreds of trees over four inches in diameter, with large, fine heads, destitute of fruit. At the same time we saw numbers of standard trees, trained with low heads, in the form of dwarfs, that were loaded with fruit. The Duchess of Oldenburg, Hawthornden, Keswick Codlin, Yellow Incestrie, Fameuse, etc., were especially productive. In the grounds of W. C. Pearsall, near Port Byron, with trees set some eight feet apart, and with dwarf training, that is, low heads, almost all varieties were in bearing; while in an orchard of some hundred dwarf apples, treated in the same manner, and of as good size, in the grounds of J. S. Bradford, at Springfield, there was not a single specimen of fruit. Our eastern friends tell us the trees bear well with them, but will they grow thrifty with us, they do not bear fruit. In our own grounds the trees blossom freely, but we have never had the first sample from them. We have yet to see the first dwarf apple tree in even moderate bearing on the prairie, and have seen but few out of a large number on timber land in full bearing; in this respect falling far behind the standard when treated in the same manner. Thomas says the best stock for the apple is the common seedling apple. Downing and other prominent writers say the same, and we are led to infer that it is the interested nurserymen that have made up public opinion on the subject of dwarfs, without any better or more substantial reason than that they profit by it. Certainly they have thus far failed with the apple, and if there is no remedy, it is time that an end was made to the deception. Mr. Douglas, of Waukegan, suggested to us that the fault was in the setting; that like the pear, the tree should be set just below the junction with the paradise stock, but in this we can see no particular advantage, for the paradise, unlike the quince stock, is hardy, consequently this cannot be urged against it. To further test this question, we have since examined a large number of trees, and can see no difference in their fruitfulness. As Mr. Douglas has been the most successful with the dwarf apple of any of our friends, we can only attribute it to his closely sheltered grounds, the winds of the lake, and his peculiar soil.

Benjamin Vancil, near Cobden, in Union county, has for a number of years fruited the Paradise itself, and sells the fruit in the St. Louis market. The fruit ripens there in July, and as there is at that time little good fruit in market, this variety commands a ready sale at a good price, often at one dollar and a half a bushel. The quality of the fruit is inferior, giving one an idea of cork, leather and India rubber, yet they do for cooking; but the Keswick Codlin, which is now introduced into that section, will drive them out of market. Within the past five years Mr. V. has extended his dwarf orchard

by sprouts from the roots of the o'd trees. From whom these trees come no one can tell. Mr. V. is nearly seventy years old, and they were there when he was a boy. They probably were brought in by the old French settlers some hundreds of years since. Mr. V. has several apple trees dwarfed on the Paradise, which came from Rochester, but they have evinced no particular desire to be loaded with fruit—they had on now and then straggling specimens. If they will not do well near Cobden, the very seat of Pomona, we cannot expect any great returns from them on the prairie. We know of no other place in the country where the Paradise has fruited, and do not now recall to mind reading any account of such an occurrence; but of the above we know, having seen both trees and fruit.

We are now prepared to make the assertion that the apple dwarfed on the Paradise or Doucian, is worthless for the prairie, and of doubtful value on timber land; even there a crop is the exception, not the rule. We therefore advise tree-planters not to depend upon them, for they will bring nought but disappointment.

But what shall we do for fruit at an early day on the new prairie farm? asks one. If you depend upon the dwarf, it is certain that you will be disappointed; nor do we believe one-tenth part of the glowing accounts of the productiveness of dwarf apples at the East. Too many of these accounts come through those who have the tree for sale, but we can point out a path by which you will be insured an early fruitage. Plant two or three year old trees, that have low heads, none of them over a foot from the ground, treat them as you would dwarfs, by giving them good culture, and shelter them on the northwest and south, giving them an open aspect to the east, but to succeed in this you must select certain varieties that have the habit of early bearing, for such as Northern Spy, Baldwin, Rhode Island Greening, Spitzenburg, Swaar and Seek-no-further, will certainly disappoint you. The most valuable of all early bearing sorts is the Keswick Codlin. Three year old trees properly treated, will almost invariably bear a fair crop the second year after setting out. Hawthornden, Yellow Ingestrie, Early Pennock, Holland Pippin, Duchess of Oldenburg, all bear young, are valuable and will furnish fruit from the last of July to the last of October, in this part of the State. For autumn, we can have Fameuse, Cooper's Early White, Fall Swaar and Late Golden Sweet. The winter varieties are more tardy—Stannard, Dominie, Raules' Janet, Wine-sap and Ramsdel's Sweet are among the best.

For the purpose of early fruiting we would prefer to plant them ten feet apart, so that they will afford shelter to each other, but for the orchard, we would put them twenty to twenty-four feet. We have already in a previous article discussed the subject of low heads, and if there is any value to be derived in that direction, it should be in favor of the dwarf tree, as all of them are cultivated in that manner.

If there is any person still a believer in the value of dwarf apples, let him set out alternate trees of standards that thrive alike, and at the end of four years he will see his error. We

have until within the past two years, been impressed with the value of the dwarf apple, supposing that if it did not yield large crops, yet that it would come into early bearing; but after having been disappointed year after year, we began to inquire if that was peculiar to our own grounds, but found that our trees came within the general rule, which was, no fruit, while a moderate crop was the exception. As a nurseryman, the above view of the case is not a pleasant one, for we have long rows of dwarfs for sale; but there is this consolation, the believers in dwarfs yet live, and will not give up their favorite theory, though we should preach to them a year. But we advise all of that class to plant at least half of their orchards standards, and by way of compromise, treat them as they do their dwarfs.

THE DWARF CHERRY.

Thousands of trees dwarfed on the Mahaleb stock have been planted on our prairies, yet who ever heard of a peck of the fruit of these trees ever reaching market? It is probable that some fruit has been grown, in fact we have seen it on several occasions, but in such limited quantity that the encouragement to plant more of them is not certainly warranted. In the north part of the State the Mahaleb is too tender, for if any part of the Mahaleb stock is exposed above ground, it is pretty certain to be killed in a severe winter, and of course the tree will die; we have lost hundreds from this cause, both in the nursery and the orchard, when a resident of Cook county. This stock does not really dwarf the cherry for the first dozen years, if at all, as can be seen by any person at all conversant with the subject. To make the rapid growing sorts assume the form of dwarfs, they must be cut back at a year old, so as to form low heads, and these low heads are the only valuable thing in regard to them. As far north as Bloomington and Loda, we consider the Mahaleb sufficiently hardy for stocks, even then we would prefer the common Morello or Kentish stocks.

It is safe to say that not less than a quarter of a million of dollars have been sunk by our farmers and other tree planters in proving that the Mazzard, so lauded by Downing as a valuable stock for the cherry, was worthless for the West. Years before that fact was conceded by our nurserymen and tree planters, we had become convinced of the fact and discontinued its use, and nearly ten years since we pointed out to the readers of the *Tribune* that it neither of itself dwarfed the tree grafted upon it or was hardy. It was something new and would take the place of the condemned Mazzard, whether of any value or not.

When we speak of a dwarf tree, we understand that it is one grafted upon a slow growing stock, that gives a dwarfish habit to the variety, but as the Mahaleb fails to have this effect, it is sheer nonsense to call trees grafted upon it dwarfs, for at best they are simply low headed trees. The fact is we have no true dwarf cherry trees, while we have several of dwarfish habits, among which may be enumerated Early May, so called, and known throughout Kentucky, Ohio,

and parts of Indiana and Illinois, Reine Hortense, English Morello, etc. Where the Mahaleb proves hardy, we are not disposed to find fault with it as a stock, though we think it has no advantages over those enumerated.

The Early May we believe to be the only cherry that has been sent to the Chicago market from the prairie orchards, and hundreds of bushels of them have been sold within the past five years. These have been worked and treated as standards grafted on Morello stocks, three or four feet from the ground. Now, if the dwarfs have any value in supplying the market with fruit, why have they not done something in that line? It is well known that most of the May cherries came from the vicinity of Cottage Hill, and we venture to say that as large a number of the so-called dwarf cherry trees have been set in the vicinity of Cottage Hill, as is contained in bearing orchards of the May cherry. No one now thinks of setting out the dwarfs at all acquainted with this variety. Within the past two years, this variety has been largely worked on Mahaleb, both at Cincinnati and among some of our own nurserymen, and as the tree has a spreading, dwarfish habit, and being worked near the ground, will be sold as dwarf trees.

All we have learned in cherry culture of any value, is the unpleasant truth that only a few varieties, among the hundreds tried, have proved of any value, and among this small list but one has become a profitable market cherry, and that is the Early May, or May of Kentucky, and not the Early May as described by Downing. We observe that some of our nurserymen and tree planters have purchased and are propagating this last named variety, supposing it to be the same, but to their bitter disappointment they will at an early day learn that there is a wide difference. From fifteen to twenty miles west of Chicago are large orchards of this cherry, that will in a few years send thousands of bushels of fruit to market. The fruit is very excellent for cooking, and when dead ripe, tearable for eating, but not to be compared to the valuable table sorts, such as White Ox Heart, Tarterian, &c., but as these will not flourish with us, treat them as we may, we must be content, and feel thankful that we have one good cherry that is hardy, at all times, and reliable in all parts of the State. We advise our cherry tree planters to throw away no more money on the so-called dwarf cherries.

THE DWARF PEAR.

Perhaps no subject has been more generally discussed than the value of the dwarf pear as compared with the standard, and yet without any decided advantage to either side. The extraordinary yield of pears the past season has given to pear culture a stimulus such as it has never before had in the West, and next spring will witness the planting of an immense number of pear trees, both dwarf and standard. The mania at present is mostly for dwarf, as we have had good opportunity to know in our visit through the State as a member of the Farm Committee of the State Agricultural Society. The best pear orchards are standards, and in a few years we

have no doubt that standards will be used almost exclusively for orchards, though for small gardens the dwarf will for a long time continue popular. We would not advise any person to invest largely in pear orcharding, unless he has plenty of funds, in case of failure, for we consider it one of, if not the most uncertain branches of farming, and it may well be called the "lottery of Pomona." In some cases the profits will be large, while others will reap a perfect failure. Unlike the apple, the pear is wayward, and subject to casualties. It is true that we are learning much in regard to the varieties adapted to our soil and climate, but much will depend on shelter, soil, aspect, manures and culture. We visited one pear orchard of twenty-four hundred trees, all dwarfs, but the selection of varieties was in the main badly made, and in all the dwarf pear orchards that we visited, more than half the varieties are worthless, but in the case of standard orchards, this was not the case, and the committee awarded the premiums in both cases to the standards, though some of the competitors had orchards of both. The best and most promising pear orchard in the State is underdrained and mostly set to Flemish Beauty, with one or two other kinds on pear stocks. In our own grounds we have about one hundred dwarfs set in the fruit garden, while our pear orchard is of standard trees, set sixteen feet apart, and trained with low heads. Next spring we shall add to them mostly of the Bartlett and Flemish Beauty, with a few of Osbands Summer, White Doyenne, Madaline, Fondante de Automne, Louise Bonne de Jersey, Onondaga, Stevens' Genesee, and Winter Nellis. Louise Bonne de Jersey is probably the most valuable of all on the Quince. The varieties above enumerated are all early bearing sorts, and among the most hardy and valuable for the prairie. The Bartlett, so much lauded on the quince, is full as early on the pear stock, and is more productive and hardy. The truth is, this variety does not unite well with the quince, and the trees at best are short lived, often breaking off at the point of junction. The Flemish Beauty the most productive of the large, showy pears, should never be worked on the quince, but grafted at the ground on the pear stock. It is useless to plant pears except on dry land, either naturally or artificially underdrained, and they must be sheltered from the severe winds. The pear tree will endure an immense amount of cold, but must not be exposed to severe winds either of summer or winter, nor to sudden changes of temperature. More than half the pear trees now in the nurseries, both east and west, are worthless sorts, and some nurserymen very much prefer to make their own selections in filling orders. In this case you had better pay an extra price for what you want and what is of real value, than to fill your grounds with trees that will only return you disappointment.

DWARF PLUMS.

Plums are dwarfed on the Mirabella, a small European stock, but now the practice is to graft on the wild plum. There is no question of the value of this stock, as they are hardy in all parts of the country, and really dwarf the large, fast growing kinds, and thus render them more productive.

[For the Illinois Farmer.]

The Rome Beauty.

ED. FARMER: Allow me to recommend to you the cultivation of the Rome Beauty. There are trees in this part of the country which have been set eighteen years—they produce prodigious crops. It keeps nearly as well as the Raules' Janet, which, by the way, is the favorite here. The tree promises to be long lived, and its branches are as tough as the willow; it bears every year, and the fruit is of large size, some of the trees had twenty-five bushels this season. They stand on the west side of the orchard, and on low ground; the orchard is on the west side of the timber. The trees were set eighteen inches deep, and were well cared for ten years, they then fell into the hands of one of the *careless crew*, who has treated them accordingly. The Rambo trees are decaying, yet there were specimens I have never seen equaled in the State, certainly no better were ever raised by old Peter Rambo himself.

Yours truly,

H. RUTHERFORD.

—The above is the first account that we have of the Rome Beauty fruiting in this State on trees of some age, and we are glad to hear so good an account of it from so reliable a source as that of Dr. R.

The Rome Beauty has not given satisfaction in all parts of Ohio, but in the localities adapted to it, it has become a great favorite. It is possible that on the prairie, it may become one of our leading varieties. The location mentioned above is near the north line of the county directly east of Okaw station on the I. C. R. R, and on the west side of the Embarrass river, certainly not so good a natural location for fruit as on the east side of the river, on account of shelter from the heavy southwest winds. We have introduced this variety into both orchard and nursery, but like all untried varieties, with some misgivings, but hereafter we shall feel more encouraged in regard to it. The Rome Beauty is one of the most magnificent of the whole apple family, and for market is among the most popular. In this county are several thousand trees of this variety just beginning to show fruit, and we shall soon know more of its value in prairie orchards. We are at a loss to understand about the setting eighteen inches deep, possibly the Dr. meant that the holes were dug that deep; will he please explain?

Ed.

Sorghum Sirup and Sugar.

From the general silence of the local press and agricultural journals of the West on the subject of sorghum, we feared that domestic sugar cane and manufacture had had its day. Now is the very time every gallon of homemade molasses will be needed, and we are gratified to learn from reliable statistics and estimates that the sorghum crop will go far toward sweetening the West and Northwest the present season. It is estimated by those who are interested and have given attention to the subject, that 2,500,000 gallons of Sorgho molasses were manufactured in Ohio last year, bringing an average of 50 cents a gallon, and that the crop of cane this year exceeds that of last in the ratio of five acres to one. It is known that, in round numbers, 300 cane mills were sold in Cincinnati, 100 in Columbus, 200 in Zanesville, 200 in Mount Vernon, and 100 in Piqua last year, and 100 to 200 must have been sold at other points in the State. The value of the Sorghum and Imphee crop last year in the States of Ohio, Indiana, Illinois, Iowa and Wisconsin, is estimated at FIVE MILLION DOLLARS! Surely the sugar fields of free labor have made good progress in the very few years since they began to grow cane. The capacity of our corn regions for growing sorghum and imphee is unlimited, and the demand for sirup grows rapidly with its use. Through separation of the vegetable matter from the juice by improvements in manufacture has been obtained, and the sorgho, with many, now ranks with the best golden sirup of the tropical climate. Like the use of the tomato, taste for it grows with eating; and every gallon made meets with a ready sale at fair prices.

Of the extent and profits of sorghum culture about Dayton, a few facts and figures may be of interest. Mr. George Hepner, twelve miles from Dayton, last year manufactured 2,000 gallons of molasses, which he sold at wholesale at 42 cents. He kept an account of cost of culture, manufacture, interest on land, &c., amount to \$37 per acre. The yield of molasses was 300 gallons per acre, leaving a net profit of \$98; more profitable than tobacco, considerably cultivated in the vicinity of Dayton, and not exhausting the soil. Mr. Hepner took the first premium on 20 pounds of sorghum sugar, a fair, well crystalized article, and pleasant to the taste. He finds no difficulty in making sugar from the cane with Cook's Evaporator. Mr. A. Clemmer, near Dayton, manufactured 4,000 gallons of sirup last year, which brought 69 cents. Last year he raised but one acre of sorghum on his farm—this year he has six, which he stated to be about the rate of increase of sorghum culture in Montgomery county. Mr. Hedges, the former noted sugar cane mill manufacturer in Cincinnati, after trying Pike's Peak, is going into the sorghum business at Dayton on quite an extensive scale. He has invested \$5,000 in sugar machinery, engaged cane on one hundred acres to work up this fall, and says he expects to live and die by sorghum. Belmont stands at the head of sorghum counties in Ohio.

In 1858, the sorgho experiment was generally considered a failure. The invention of Cook's Evaporator turned the tide. Two farmers near

Mansfield sent out some 500 pounds of sorghum sugar made upon it. Hopes of agriculturists re-kindled. Many planted, and in 1859, the use of 700 Cook Evaporators demonstrated the success of the sorgho experiment. Acres were multiplied in 1860, and over 1800 evaporators yielded about 2,000,000 gallons of sirup, thus saving the North a million of dollars on a single article of household necessity. Is not sorghum one of the farmer's true friends in war and hard times?—*Herald, Cleveland, Ohio.*

—The above facts may be of interest to our farmers, and we can assure them that we of Illinois are not lagging behind—scarcely a neighborhood but has its one, two, or three mills for making sorghum sirup.

At the State Fair, we saw one of Cook's Evaporators in operation; there can be no doubt as to its value in sirup making over any that we have seen in operation, except perhaps, those using steam. They make a superior article of sirup, are cheap and durable, and have become the most popular. In this county several of them are in use; others use evaporators made with sheet iron bottoms, and wooden sides, these answer a tolerable purpose, but do not make so nice an article as Cook's. Ed.

A Grain Binder.

There was one machine which attracted considerable attention, and from all that we could gather of farmers present who had used it, merited all that it received. We refer to a simple, yet nondescript machine called Brunson's grain binder. This binder is attached to a reaper, and enables one man to bind the grain as fast as it is delivered to him by the raker, without leaving the platform at all. It will be at once apparent that this not only is a great saving of grain, but a great saving of labor. The material of which the band is made is of small annealed wire, which costs but a trifle—fifteen or twenty cents worth being sufficient to bind an acre of grain. The sheaves are bound of any size from a diameter of a quarter of an inch to one of fourteen inches. It is not difficult to operate this machine, and an important advantage which is secured by their use is best expressed by the language of a farmer who had used one, and said to the writer, "We have got these hired men with their high wages in harvest time in a tight place, sir. They can't dictate terms to us any longer, and compel us to surrender at discretion. Neither are we compelled to make slaves of our families in order to feed half a score of hungry men. We can do our harvest with the help we ordinarily use on the farm, and without waste, too." That is about as concise a statement of its advantages as a man could make. It has now been used two seasons, and all experiments have been made with a view to its perfection, and all suggested improvements are at once adopted, if well established. We ex-

pect it, or some binder, will become as essential to the western farmer as the reaper now is.

—The above we clip from the correspondence of C. D. Bragdon, the western editor of the *Rural New Yorker*. We have carefully examined several of these binders, and as yet have seen nothing to give us any encouragement in that direction. Straw bands, put on with human hands, will hardly be superseded by wire and iron muscles.

A Few Words about Sheep.

Last fall, several thousand fine-wool sheep were brought into this section from the east and sold at high prices. Nothing was talked of but sheep. No other farm stock was so profitable. It was so profitable. It was with difficulty we could dissuade one of our friends from purchasing a large flock. He had caught the fever. The increase of lambs he said, would pay for the keep, and the wool and mutton would be clear profit. We argued that when everybody was buying sheep, that it was a poor time for *him* to buy. No doubt, we said, sheep were a profitable stock, but it is possible to pay too much for them. People seem to move like the pendulum of a clock, from one extreme to the other. Like sheep, when one jumps the whole flock jumps—and that whether there is anything to jump over or not.

This season wool has been very low, and now these same men who were so sanguine of the profits of sheep, will dispose of their flocks and go into some other business. Such fickleness in intelligent men would be a matter of surprise were it not so common. True, sheep have not paid much the present year; but is not the same true of cattle, of the culture of grains, and of the dairy business? To those who steadily pursue the business, sheep have probably been as profitable as any other branch of agriculture.

If there were good reasons for keeping sheep last fall, there are good reasons now. Wool is low, but so is everything else. It is a great folly to sacrifice the sheep as we fear many will do. Like everything else, wool cannot long remain below the cost of production. It will find its level. This country has never produced more wool than is needed, and will not do so for many years to come.

It is perhaps true that coarser wools will be more in demand than formerly, and that they will command a relatively higher price than those of finer quality. This is the case at present, owing to the demand for army cloth, and it may be that in future it will be more fashionable to wear a coarser cloth than it has been for some years past. In England, fine cloth is not as generally worn as it was twenty five years ago, and we think there is a tendency here in the same direction. It has been for a year or two rather fashionable to wear coarser cloths for business suits. This may not materially affect the demand for fine wool, but it would certainly give us a good price for the common qualities.

Of one thing, however, we are confident, mutton is eaten much more generally than it was ten years ago. This may be owing to the fact that the market is supplied with a much better quality of mutton. The English are called "a nation of beef-eaters," and so they are, compared with the French, but assuredly not as compared with Americans. We eat more beef here, at least in the cities, than any other nation. Mutton in England always commands a higher price than beef, while here the reverse, beef is always higher than mutton, not unfrequently from twenty-five to fifty per cent. higher. Our beef will compare favorably with the English, but our mutton is, as a rule, decidedly inferior. The excellent quality of English mutton has been attributed to the fact that the sheep are fed on turnips during the winter—this green food, it is thought, giving a juiciness to the mutton. We do not think this is the principal reason. It is rather to be attributed to the fact that sheep in England are kept primarily for their mutton, and fed much higher. We see no reason why a South Down sheep fattened on clover hay and grain or oilcake in this country should not be just as good as when fattened in England. Some time ago we eat a boiled leg of Leicester mutton in Canada that we thought as good as any Leicester mutton we ever eat in England—and yet the sheep had eaten few if any turnips. We once dined with our friend John Johnson, of Geneva, N. Y., and he had on the table a leg of mutton so large and so fat that we thought it must be Leicester, and yet of such excellent quality that we voted it South Down, but which Mr. Johnson declared, with a merry twinkle in his eye, to be *Saxon Merino*. The point to all this—if there is any point—is, that we can raise good mutton if we take the pains to feed it high enough.

In the neighborhood of New York, there are those who are in the habit of buying ewes in the fall, of the common breed of the country, and putting them with a South Down ram in October. As sheep go from twenty-two to twenty-three weeks, this would bring the lambs in March and April. The ewes are kept in fair condition during the winter, and the lambs are sold the following summer to the butchers. They command good prices, and this practice is said to be profitable.

We do not see why it might not be more generally adopted by farmers.

An old-country farmer, at our elbow, says: "Why not advise them to keep Leicester?" For this reason, it costs too much to buy the thorough breeds. And besides, we have others on hand. It is also a well known fact that when a mongrel bred ewe is crossed with a thoroughbred ram, the lambs partake largely of the qualities of the male. Our common bred ewes, therefore, are just the sheep to cross with for this purpose—better than thoroughbred Merinos.

Whether Leicester or South Down rams are used is probably not of much consequence. Probably the South Down would be preferable, as the cross would not be quite so great.—*Genesee Farmer*.

—The above is most valuable advice for our

prairie farmers. We have on several occasions called the attention of our readers to the value of the long woolled mutton sheep. We need more and better mutton. In a conversation with one of the large farmers of this county a short time since, he assured us that this class of sheep were profitable, and that their wool at twenty-five cents was a good paying business, when he could sell lambs at from one to two dollars each; others have since confirmed the same thing, and at this time, when corn growing is at so low a rate, there is a disposition to go more largely into wool and mutton. One of our neighbors, who has a large flock of good native sheep, purchased a couple of full blood South Down bucks at the State Fair, with a view of improving his mutton; he says there is no trouble about the profit of sheep, if one does not go too largely into the high priced ones, especially the merinos.

Mr Rosenstiel, of Freeport, one of our most successful flock masters, largely interested in the fine wool breeds, stated at the State Fair that for ordinary farmers the middle wool sheep would pay the best. He says there is no branch of farming at this time more worthy of attention than wool growing.

We believe all who have persevered in sheep husbandry have been well satisfied with the results. Corn is so cheap in this country that turnips are seldom resorted to—the uncertainty of the turnip crop is a good reason not to depend upon it, so long as corn answers the same purpose.

We have several small woolen mills in the State, and from what we can learn, they are all doing a good business, and crowded with work.

The future of wool growing looks brighter, from the fact that it is being better understood.

ED.

TRAGEDY AT MARINE.—At Marine, Madison county, a horrible tragedy took place a few days since. A German named Feikert, who had become insane on account of the death of his wife, entered the bedroom where four of his children were sleeping, all of whom he shot through the head, one after the other, with his revolver, then shot himself with a rifle, loaded with buckshot. Two other children were not in the house, and thereby escaped.

—"Doctor," said Frederick Reynolds, the dramatist, to Dr. Baillie, the celebrated physician, "don't you think I write too much for my nervous system?" "No, I don't," said Dr. Baillie, "I think you write too much for your reputation."

Illinois State Agricultural Society.

A meeting of the Executive Committee will be held at the Rooms of the Society in Springfield, commencing January 7, 1862.

The premiums offered on Essays, Farms, Nurseries, Orchards, Field Crops, Draining, Book keeping, Sugar and Sirup will then be awarded.

The following is a list of premiums for which entries may be made up to the first day of the meeting. Entries for the other premiums are closed.

ESSAYS.

Best approved essay on the breeding, rearing, breaking and management of Horses in Illinois, based on the practice and theory of the author.....	\$10
Best approved essay on the breeding, rearing and management of Cattle in Illinois, based on the practice and experience of the author.....	10
Same for Sheep.....	10
Same for Swine.....	10
Best approved essay on the cultivation of Cotton in Illinois.....	10
Best approved essay on the cultivation of Chinese and African Sugar Canes, the expression of their juice, and their manufacture into sirup and sugar, based on the practice of the authors.....	10
Best approved essay on Farming in the north half of Illinois.....	10
Same for South half of Illinois.....	10
Best approved essay on the preparation of soil for Fall Wheat, Spring Wheat, Corn and Oats.....	10
Best approved essay on Orchards in Illinois, embracing the selection of trees, location, preparation of soil, culture and after management of trees and fruit.....	10
Best approved essay on Road making on the prairies of Illinois.....	10
Best approved essay on Drainage, showing the methods pursued, the improvements resulting therefrom, with a full detail of operations, the depth of drain in different soils, and the expense attending the same.....	10
Best approved essay on Insects injurious to vegetation in Illinois with suggestions as to the best means for their destruction.....	25

SUGAR AND SIRUP.

Best 10 lbs Sugar, made from Chinese or African Sugar Cane.....	\$25
Best gallon of sirup, made from Chinese or African Sugar Cane, without the use of cleansing agents other than fire and the skimmer.....	15
Best gallon of Sirup made from same in any manner...	15

Competitors to furnish careful detailed statement of mode of manufacture, machines and implements used, and cost of production, verified by affidavit, and samples to be sent to the Agricultural Society's Rooms, for the January meeting, 1862.

In view of the great interest the citizens of the Northwest have in the manufacture of Sugar and Sirup from the Chinese and African Canes, it is confidently expected there will be a large exhibition of very superior samples.

Manufacturers of Mills and Evaporators will certainly find it to their interest to have on exhibition, samples of the product of their implements.

Any correspondence designed to be laid before the Executive Committee at this meeting, should reach me or some member of the Board, before the 7th of January, 1862.

JOHN P. REYNOLDS,
Cor. Sec'y Ill. State Ag'l Soc'y.

Rooms of State Ag'l Soc'y,
SPRINGFIELD, NOV. 23, 1861. }

Sorghum Manufacture.

We have visited three different establishments recently, for the manufacture of sugar cane into sirup, and the results are still more encouraging than of any previous year. A. H. Miller's Rotary Alternating Evaporator is the kind in use at each of the places we visited. Our first visit was to Mr. Fletcher, of South Rockford, who had just set up his mill and evaporator in the most substantial manner, and had turned off the last crop of sirup, which was very fair, and of excellent quality.

We next looked at the works of Joel Faulkner, on the Byron road, four miles south of Rockford. He was also a new beginner, but was succeeding admirably, having made several specimens of sirup that we have not seen excelled anywhere yet.

On Saturday last we went to see Mr. Foster, of East Rockford, who has been manufacturing sirup from the sugar cane ever since it was first grown in the country. Last year Mr. Foster used one of Cook's Evaporators, but this year disposed of it, and is trying one of Miller's, and he does not hesitate to pronounce it far superior to Cook's. To use his own language, that "he would not use one of Cook's Evaporators if it was given to him, after trying Miller's." He further states that the one in present use consumes less wood, and is much less liable to scorch or burn sirup, and can reduce the juice of the cane to a heavier article of sirup and much fairer.

We have closely observed the growing and manufacturing of the sorghum for the last three or four years, and have learned from others experienced in the business, sufficient to confirm us in the opinion that the manufacturing of sirup and sugar from this plant is a success, and will save millions of money to our country.

The most important thing to learn now is, how to grow the plant successfully and have it ripen in season for this climate. We must seek the earliest varieties and plant early, and adopt all processes that will advance the growth of the cane. Also, we have to learn more about the proper time, and the best manner of cutting and preparing the cane for the mill. If we can successfully grow the cane and have it ripen, which we have not the least doubt, there is no further question in reference to the manufacture of sirup and sugar.

Mills and evaporators of sufficient capacity will be ready for the most successful execution of the work. The gentlemen whom we visited expressed a desire that we should have another Sugar Convention immediately after the season for manufacture is over. This will be a very important subject for consideration at this time, and we hope that there will be a mutual agreement among all those who are growing cane, as well as manufacturers, to make it an occasion worthy of the importance of the subject.—*Rockford Register.*

— The man who lately drew an inference has gone to drawing a hand cart, as it pays better.

Live Fencing.

Mr. C. R. Overman, formerly of Canton, Fulton county, in this State, but now of the firm of Overmann & Mann, of Bloomington, writes to the *Rural New Yorker* on this subject.

An article on the subject of "Live Fencing," over the signature of W. M. Beauchamp, I would heartily indorse his sentiments in the *abstract*; but as he has, *sons ceremonie*, bayoneted one of our best friends, I feel bound to have him arraigned, at least, before the tribunal of public opinion at the West.

Mr. B., with a sturdy thwack of his potent pen, affirms "the Osage Orange will do no more nor no better make a hedge than the prairie rose." Why did he not tell us on what grounds he condemns it? He says "a publisher examined over thirty Osage hedges in Illinois and found not more than five or six that could be called an apology for a hedge," etc. Is this conclusive evidence that the Osage is a failure *per se*?

We are much in the habit of looking to the East for light, and we take it hard to have the floodgates closed so abruptly, dooming us to grope our way in the dark. It must be confessed we are going astray with rapid strides, and it seems very cruel in Mr. B. to withhold argument in the premises. We are persistent in error, and wayward—seldom induced to change our course, unless the quicksands and sloughs are pointed out. But to the point.

The history of live fencing, as a business, dates back in Illinois some twenty years; the subject of the first fair trial was the English Hawthorn—in the hands of competent hedgers from "Britain's Isle." The fairest test, by its most partial friends, resulted in utter failure, and they were forced to the conclusion that the Hawthorn was not the hedge plant, for Illinois at least—and why? It was found incapable of withstanding the heat and drouth of our summers, and the seasoning winds of winters, however well adapted to the mild and humid climate of England, or even that of New York. Even as an isolated ornamental tree, it grows feebly and thin here. Though its blooms and berries are pretty, we regard it, as a hedge plant, with no more favor than we do the "prairie rose." The next experiment was tried with the Washington thorn (*Crataegus cordata*), with only partial success. It adapts itself to the soil and climate, and makes a fine, profuse growth, with sharp thorns and delicate leaves; and it also abounds in fragrant white flowers and red berries; but to make a hedge sufficiently strong against hogs and unruly cattle, it requires to be plashed, grows rather slowly, takes from six to eight years, with some care to complete the hedge, and after all it is subject, as are all the Hawthorns, to attacks of the borer and the million leaf-eaters. The Buckthorn (*Rhamnus catharticus*), is very hardy, a profuse grower, and makes a thick, handsome hedge, but from want of thorns it is not sufficiently repulsive for outside fences, though we have seen a few good ones. Various other trees and plants have been tried for the purpose, without any suc-

cess. Hence, as live fencing is, with us, a prime necessity, our research became earnest in quest of a plant for the purpose, which should combine the greatest number of requisite properties; and when "in the course of human 'events'" visionary men introduced the Maclura, the shout of "Eureka" went up from Prairieland. In brief time it was demonstrated to be sufficiently thorny and hardy enough for the forty-third parallel. Moreover, it was found easy to propagate from seed, to transplant with great certainty, to grow rapidly, to repel insects and vermin, and to bear crowding and cutting to any extent; and as for durability, it was confidently asserted it would last two hundred years! certain old Texan rancheros having tried it, as the boy's father did the crow.

With marvelous rapidity it spread over Prairiedom, and so great was the public confidence in its efficiency, that some seemed to think all that was necessary was to load an old "scatter gun" with the seed, point it in line of the hedge row, and "touch off." Others procured the plants and carelessly stuck them in the rich, friable soil, and waited with confidence for results, and the only wonder is that such a proportion as five or six in thirty should succeed. Others, who succeeded in getting a "good stand," and believing it could stand grief, submitted it to severe tests—pasturing it, making a turn row upon it, cutting it down each month to thicken it the first season, and such like "mild punishment." As might have been expected, disappointment was the result, and the project would have been abandoned in despair had it not been for the examples of a few thorough, practical men, who, eschewing the doctrine that good things are apt to come spontaneously, set about hedging in earnest, and by simple means, and a small outlay of care and patience, succeeded in erecting barriers against brindled bull and "prairie rooter" alike. Even in the first round, enough good fences were made to demonstrate the practicability of hedging with the Osage. The general faith, manifested by works, and hedge fences have become a fixed institution in the rural districts. There are now few neighborhoods in the older settled portions of Illinois in which it is not found on almost every farm. In winter it stands like a cordon of bristling bayonets, defying the inroads of the most headstrong stock, and in summer its "masked batteries" are alike effective in repelling the onset of pig, bull or bear—in short, anything that comes in contact with its terrible spines. A breachy horse is never known to make a second attempt to pass through or over a tolerable hedge of the Orange. I know of no plant that will better bear crowding and retain its vitality, and I have to-day examined a hedge so close and thick that a rat would be puzzled to make his way through it. At first, wide planting resulted in more failures than even the neglect and abuse before mentioned, yet many old, ragged rows, which a few years ago promised nothing but nuisances, have been plashed and "coopered up," and by this means are made into impassable fences, though imperfect hedges. I only wish your correspondent could examine, with me, the hundreds of miles of good hedges now turned out in the county of Fulton. I would

like to see him compare the Orange in a finished hedge with the little fragile "prairie rose." Or, if he could view the landscape from the Mound, on which this is written—look down, as upon a map, over the succession of farms, stretching for miles on the gently rolling prairie, and see on every side the boundaries of field and farm defined by a streak of deep, rich green, looming up above the crops—he could not but be charmed with the sight. He would quickly retract his slander of the Osage. We at the West esteem it the best plant in the vegetable kingdom for our purpose; hence we are a little sensitive when outsiders derogate it. We base its chief merits upon its utility, and the absolute security it affords the farmer. When suffered to run up—and many neglect to trim it—the appearance is not ornamental, except in the distance; but when it is kept neatly clipped, nothing can be more graceful, or give to field or farm, small or large, such a charming finish.

Where a windbreak or screen is wanted, as around a stock farm, pasture or orchard, it should be planted closely, and allowed to run up as tall as it will; but along roadsides and wherever the view is worth preserving, it should by all means be shorn off and the brush burnt. Horse power machinery for the purpose of shearing hedges with precision, ease and speed, are now in process of construction. Should this operate well, the cost of keeping the hedges in trim will be merely nominal, though the expense of hand-trimming is not heavy.

Since I left this locality, five years ago, most of the hedges have been perfected, dead fences removed, and the whole landscape so changed and improved in its outlines that it scarcely seems like the same region. The only complaint heard against hedges is of the neglect to trim them by the roadside. In point of hardiness, the Osage hedges here withstood winters that have killed seedling apple orchards thirty years old, and almost every heart cherry in the country. Only in that part of Illinois where the gopher abounds is there found a single drawback to live fencing; and even there, though this rascally "sub contractor" often cuts off the roots and saps the foundation of the young hedge, the farmers are not discouraged from planting, and hedges will yet abound on every prairie farm. In these terrible times farmers are willing to put off everything but their hedging. Plants are in greater demand than any other commodity, and I have known four to five hundred bushels of seed planted in a single town. The seed will be scarce while the war continues.

—We have a boy at home about three years old, who, by the way, is a regular "shaver" in his talk. One day we were trying to teach him his alphabet, and asked him what "B" stood for? "George," was his prompt answer. "No," we replied: "it stands for boy." "Well, ain't George a boy?" he asked triumphantly.

—"There's a divinity that shapes our ends," as the doughnuts said when the girls were making them.

Pasturing Roads—Fence Laws.

A writer in the *Rural New Yorker* gives a very lucid digest of the law in regard to this subject. We believe that the law in our state is substantially the same as the obnoxious law to which he alludes included, but as no one here thinks of *soiling* their stock, with us, of course, there is no objection to it. The reason that our farmers do not better understand their rights in this case is the same as those alleged, the difference being the owners of adjacent farms being obliged to make a lawful fence are under no obligation to make road fences. We know of no law compelling farmers to fence the highway. It is true, that some of our wooden headed Judges have at times given plain common sense and plain law a wrong construction, yet we believe that the great majority will maintain the law as it is, and compel owners of stock to keep them on their own premises. This is now the case in all counties where there is little open prairie. It is a perfect outrage against common sense or common justice to compel the owners of a farm to fence out the unruly animals of his vicious neighbor, who may or may not own any land. ED. ILLS. FARMER.

This is an important subject, which deserves something more than a passing notice, as it is connected with the whole system of road and division fences, and involves the common and statute laws of the State, as well as long established customs and opinions of the people. A general opinion appears to have obtained among farmers that there is no law to protect their crops from the ravages of their neighbors' cattle, horses, sheep and swine—that their only safety is to fence out the world, or at least, they must have a "lawful fence" to be entitled to any claim upon the owners of trespassing cattle for damages. The enormous expense of being obliged to build a fence so as to turn all animals, from the largest ox down to the smallest pig, is so important an item in farming economy that it is proper that farmers should know what the laws are, and the extent of their power to protect the fruits of their labor from destruction by the action of careless, and oftentimes evil-disposed neighbors. I cannot, perhaps, give this information better than to quote from some interesting remarks before the American Institute Farmer's Club, by Joseph Blunt, an able lawyer, whose legal opinions are entitled to much weight. He said:

"The law does protect a man's property. His real estate and its products are his, and they lie under the protection of the law, whether fenced or unfenced. Any man invading his land, either in person or with his flocks and herds, is liable for all damage. He has no more legal right to ravage, or to send his cattle to destroy his neighbor's unfenced grain, than he has to cut down his neighbor's unfenced woods. They are all equally under the protection of the law. * * *

Men must be made to feel that domestic animals must be domesticated, i.e., kept at home. That if he wishes to keep domestic animals, he must take care of them, and be responsible for their conduct. This is a desirable consummation. It is the law of the land, and would probably be universally adopted as practical law, were it not for a statute passed April 18, 1838, which denies to a person liable to contribute to the maintenance of a division fence, all right to damages incurred by reason of his portion of such fence being out of repair. This act, however, is limited to division fences, and does not apply to any other. All road fences, and other than division fences kept up by adjoining owners, fall under the general law, which does not impose upon the owner the duty of protecting his cultivated land from stray cattle. That duty belongs to the owner of the cattle. To make this principle effectual it must be asserted in a statute. Although the law would afford a remedy, it must be obtained at the end of an expensive litigation."

The law of 1838, perhaps not a very just act in every respect, although it has no reference or bearing upon road fences, has done a large part towards erecting the opinion which so generally prevails, that a person must have a good fence against the road, or he cannot sustain an action against the owners of cattle for damages. The substance of that act [see R. S., 3d ed., pp. 402, 403] is briefly this: When two or more persons have lands adjoining, each must maintain a just proportion of the division fence between, except the owner of either chooses to let such land lie open; but if at any time afterwards the owner incloses it, he must refund to the owner of the adjoining land a just proportion of the value of the division fence at that time. If any person liable to contribute to the erection or reparation of a division fence, neglects, or refuses, to make and maintain his proportion of such fence, or permits the same to be out of repair he cannot maintain any action for damages incurred, but will be liable to pay to the party injured all such damages as may occur to his lands, and to his crops, fruit trees, and fixtures thereon, or connected with said land.

Let us look a moment at the justice of this act. In some portions of the State there are farmers who have discovered that there is a more profitable way of keeping stock than pasturing them. On such this law is very unjust, and should be modified so as not to compel them to build fences wholly for their neighbors' benefit. To show the action of this law more clearly let us illustrate. Suppose I own eighty acres of land, in a square chunk, one side, half a mile in length, lying on the road, and the other three sides, a mile and a half in length, is bounded by cattle-pasturing neighbors. I keep my cattle up, but this law compels me to build one half the division fence, which costs, at seventy-five cents a rod, \$180; the interest on this amount is \$12 60, and the cost divided between ten years—about the average duration of ordinary fences—would be \$18, which added to the interest makes \$30 60, which I am compelled to pay yearly to help my neighbors take care of their stock. But look a little

further. On the road I have to build a tight, strong fence, which catches all he now in winter, and makes the roads, at times, impassable, at a cost of \$120—at seventy-five cents a rod—because my neighbor lets his old sow and pigs, and unruly old cows run in the road. The interest on this sum and the cost, divided between ten years, makes a yearly expense of \$20 40. Now were it not for turning the stock which runs in the road, I could build an open, durable fence, which would be better for all practical purposes as a road fence, for less than half the expense; so we must add one half this sum, or \$10 20, to the \$30 60, found above, which makes \$40 80, besides the time spent in fixing and looking after the fence, is an annual tax upon my industry for the benefit of my neighbors, for which I do not receive a single iota in return, but am compelled to pay, for the want of a simple law to compel my neighbors to bear the expense of taking care of their own stock. Who will say that I am not entitled to such a law? If they want a fence to keep their stock, surely they should be obliged, not me, to build it.

That there ought to be some legislation to amend the act of 1838, so that a person who does not pasture his stock shall not be obliged to pay a heavy tax for taking care of the stock of his neighbors who do choose to pasture, and to make persons strictly liable for the action of their stock while in the road, must be admitted by all; it remains, then, only to consider how it can be obtained. Speculators, railroad men, and public thieves claim, and receive, so large a share of the attention of our law makers, that it looks like a serious undertaking to attempt to get any measure passed pertaining to the public good; but I think that a course might be taken to effect the passage of such a law, that would be successful—the lobby to contrary notwithstanding. The farmers have the control of the ballot-boxes, and have the power to dictate who shall be sent to the Legislature. They have only to act together, and they can elect two-thirds of the members, pledged to vote for any measure they wish to carry. To do this, they must agitate the subject, and enlist the local, agricultural and metropolitan press in their cause; and if they have any fears that their members will forget their pledges when they get to Albany, they had better give them to understand, distinctly, that if they employ the time which they are paid for by the people in giving away the people's property by millions, and filling their own pockets—as did the Legislature of 1860—and adjourn without enacting their law, they may expect Southern treatment—tar and feathers, and, perhaps, hemp—if they are ever again caught in the district they represent.

Farmers of New York, choose for yourselves whether you will be "troubled" with unruly cattle running in the road, and suffer from unjust laws. You may choose to be still longer annoyed and ravaged by unruly cattle, but let no Rural reader, at least, inquire what he shall "do with them."

Geoffrey St. Hillyear, the celebrated European naturalist, is dead.

WINE SHOULD BE MADE WITHOUT SUGAR.—Dr Flagg, of Cincinnati, well known for his connection with Nicholas Longworth in the extensive production of native wines, contributes for the *Country Gentleman*, the following protest against recipes for sugared wines:

It is not by mashing up sour, wild, unripe grapes with water, sugar and whisky, that our farmers are to become wine-growers, however well the mixture may please the palates of unsophisticated women and children, and hard working men, whose olfactories never knew any other wine than Madeira of American manufacture. Tell them that good wine is never made of sugar in any part of the world, and that to weaken with water, or strengthen with spirits is downright wickedness! The grapes must be fully ripe, dropping off ripe, and to render them so, the vines must grow on stakes or very low trellises. The expressed juice must then be put into clean "wine green" casks, and cared for very much in the same way good cider is managed. This done faithfully, and the product will be wine that will not ferment over again in the stomach, deranging the livers and muddling the brains.

All tricks of adulteration and debasement our people will take to naturally enough by mere virtue of their nationality, and without being told. After they shall have learned how to make good, pure wine, when they may, for home use, make a cheap beverage in the following way: Into a large cask fling the cheese from the wine-press, after all the juice is extracted, or else well mashed wild grapes of good flavor, till the cask is half or two-thirds full; then fill up with water, and add one pound of sugar to the gallon of water; let the fermentation begin and complete its work in the cask, and then draw off the clear wine and put away in as cold a cellar as you have, and keep it well filled and closed up. Drink it within the year.

The Strawberry.

It is interesting to observe the increased attention which is now being given in all parts of the country to the finer fruits of the garden. Our agricultural and horticultural exchanges contain numerous and significant references to the subject, together with the proceedings of sundry fruit-growing associations, extracts of which may prove instructive to our readers.

The great point of interest at the present time relates to varieties, as it is found not to pay to cultivate the old common or mixed kinds in comparison with certain sorts recently introduced.

Believing it better for beginners to introduce only one or two superior kinds rather than to experiment on many at first, we call attention to the variety to which the largest share of commendation is now being given. It is of Belgian derivation, with an awkward French name, *Triomphe de Gand*.

Gand being the name of a town specially celebrated for horticulture, this name indicates at once the origin of the berry and its supposed triumphant superiority. By degrees it has been

successfully introduced and tested in this country, until now it ranks quite at the head of the finer varieties.

The fruit grower's society of Eastern Pennsylvania, in their report of 1860, described the fruit referred to in the following terms:

"*Triomphe de Gand*, *Hermaphrodite*; fruit of the largest size, bright scarlet color, firm flesh, flavor high and rich, juicy and melting. Plant very vigorous, hardy both in winter and summer, a free, rapid grower, a good bearer, and altogether a superior sort."

In 1861 the same society reports: "*Triomphe de Gand* fully maintains last year's description, and increases in productiveness and the size of the fruit. Should be in every collection, however small."

In 1859, a correspondent of the *Gardener's Monthly* says: "From a truss of *Triomphe* eight ripe berries were plucked at one time, measuring in the aggregate 2.25 feet in circumference (an average of about three and three eighths inches each). They were magnificent in appearance and delicious in flavor."

In 1860 another correspondent writes as follows:

"After a trial of three years, Mr. Knox places at the head of the list of strawberries the *Triomphe de Gand*. The plants are thrifty, hardy and vigorous growers, bearing their fruit well up, which renders it easy to be kept clean. They are also wonderfully productive, and the fruit is not only usually of a very large size, but uniformly so, and throughout the season, which is longer with it than with most other varieties. The flavor is everything which could be desired. It is of a very beautiful crimson color, glossy, and altogether lovely. It keeps well after being picked, retaining its beautiful color and firmness, and carries better than any other variety."

Similar testimonials were offered from Long Island and Western New York at the last meeting of the American Pomological Society.

At the recent floral and strawberry exhibition in Chicago no fruit received more attention and more praise than a limited number of *Triomphe de Gand*s which were grown in this immediate vicinity.

This latter fact proves that a fruit so highly lauded in other portions of the country, is also adapted to the soil and climate of the Northwest.

Of the strawberry in general, the *Gardener's Monthly*, one of the most popular horticultural magazines of the day, speaks in the following enthusiastic terms:

"Of all fruits, the advent of the strawberry is the most welcome. Epicures may cast their longing eyes at embryo burches as they pass through their grape houses—and the men of heavy means and proportionate patience see all humbler fruits eclipsed in the anticipated luxuries of their pear orchards; but to the mass of the people all these are obscured by the strawberry. That is the fruit for the million. It is very interesting to note the great progress which this strongly republican fruit has made in its hold on the hearts of the masses. From forming a dish that might only be set before a king, and which, if history tells truth, even a royal person has been known

to die surfeited of, it has successively descended to do duty at the tables of the aristocracy, and at the humbler boards of American sovereigns, till he who does not afford the family he governs at least one good strawberry festival in the season, is not worthy even of a reputation, and is 'very poor indeed.'"

The same periodical says: "August and September are favorite months to plant out strawberries with those who desire a crop of fruit next season."

On the basis of our own experience, we should rather recommend planting in the spring, at least for large quantities. But in private gardens, where full care can be given till the plants are well rooted, and a light winter covering supplied, they may be made to do well — *Chi. Chris. Adv.*

"No Tools to Lend."

These words inscribed on the door of a farmer's tool house, recently caught our eye, and furnished a ready theme for meditation. Borrowing is an ancient and evil custom, the fruitful source of many troubles. In the ruder stages of civilization there might have been greater necessity for borrowing than now; but as the world progresses there can be less and less need of it. The tendency of cultivated humanity is to independent action—the tendency of barbarism is to servile obligation. The more educated a community the less they borrow, and consequently the more the borrowing element predominates, the greater their degradation. There are several kinds of borrowers at the present day. There are careful and careless—the slack and the prompt—those who expect to pay for the privilege, and those who don't—those who help themselves without permission, and those who forget to return. The careful, prompt-paying borrower is usually a welcome visitor. It is a pleasure to lend to such a man. This class know how to appreciate a favor, and it is of those that Solomon spoke when he said "the borrower is a servant to the lender." But there is a class to whom the lender is a servant, a degenerate class of borrowers, always to be dreaded. They wear a fair, smooth face to begin with, and a mean, sneaking face at the end. They take the precious property of another, and subject it to rougher usage and severer strain than does the owner. The chances are that the article is returned in a broken or damaged condition. A man who can misuse a borrowed thing, seldom has delicacy enough to make amends for an injury. Thus insult is added to injury, and if complaint arises, neighbors often become enemies. That such are frequent, final results of borrowing, any one familiar with social life knows.

At the farm house where the above inscription referred to was limned, there may have been peculiar reasons for it. Of these reasons we know nothing, and have no desire to. But our sympathies, quickened by trials in this lending line, have led us to recall cases that may have been real. For example, farmer A keeps all sorts of tools neat, bright, and in perfect order. He prides himself on having tools, and sacrifices

other pleasures to save money enough to buy and pay for them. He has neighbors who are unable or too stingy to buy, and so they live by borrowing, and making old apologies for tools answer instead. They can appreciate good tools, and are willing to save time in using them as well as anybody, and they never think about the propriety of remuneration.

Farmer A buys a new corn planter, and the season being backward, several neighbors are behind hand in planting, and apply for the use of the machine. The implement cost money; the owner never expected to buy another, handles it himself carefully, and reluctantly loans it. Some days after, when farmer A wants to use his machine, he has to hunt it up among his neighbors, and finds it dirty, unhoused, a nut lost off, and a wooden linchpin supplying the place of the appropriate iron one. As it has been used by several individuals, each throws the blame of damage upon the other, coolly leaving the owner to pocket the loss and its injury.

Again, farmer A gets a mowing machine, and puts it in running order some rainy day before the time of using. Soon after a neighboring farmer comes all prepared with his team, and wants to try it in his home lot, intimating that he thinks of buying when he can decide upon its merits. The machine is allowed to depart, and finally returned by the borrower without thanks or offering, but with the cool impudence that it wouldn't do its work. On examination the knives are found gapped and marked by the sticks and bricks through which it has run, and the loss of an important screw is the key to the mystery. Other cases might be enumerated. Suffice it to say that there are well off farmers in almost every town, who for years have depended upon less opulent neighbors for plows, rakes, forks and stones. These things ought not to be. Every tub should stand or fall upon its own bottom. It is neither charity or religion to lend to rich men without remuneration. A man's tools are property, and like money are entitled to security and pay. We believe more and more in the sage advice to young men that Shakespeare put into the mouth of Polonius in the play of Hamlet:

"Neither a borrower nor a lender be,
For loan oft loses both itself and friend,
And borrowing dulls the edge of husbandry."
[*Country Gentleman.*]

A NEW WAY OF FURNISHING A HOTEL.—A fellow about to start a hotel in New York hired a thief to steal bedding for him from other hotels. The thief would pay for his lodging, register his name, and request to be called very early, taking when he went sheets, pillow-cases, &c. He had visited all the large inns of the city and accumulated several dozen pieces when he was nabbed.

SINGULAR ACCIDENT.—An old man in Yarmouth had his leg broken in two places by being tripped and thrown down by a lady's crinoline.

Preservation of Eggs for Cooking.

"Preserved eggs;" says Cobbet, "are things to run from, not after." Perhaps so, perhaps not, as the case may be. At any rate, many articles of cookery, which cannot be made without eggs, are not things to run from. A large proportion of the eggs brought to the market during the winter, are certainly displeasing enough, quite uneatable as eggs, but only not offensive to the smell. They are saved from putrefaction by immersion in lime water, to which salt is added by some housewives. When wanted, they are fished out of the tub, wiped, and sometimes rubbed with a little sand to give a fire-b-looking roughness to the shell.

Cooks say they answer *their* purpose, but it is assuredly worth while to try for something better.

The three following are cheap and easy modes of preserving eggs for culinary purposes:

No. 1.—Pack the eggs in an upright water-tight cask, with their small ends down. Take eight quarts of unslacked lime, one-half pound of common salt, two ounces of cream tartar; mix up in water so as to bear up an egg with its top just above the surface; pour the mixture into the cask containing the eggs, and they will keep sound and good for two years.

No. 2.—Pack the eggs in an upright earthen vessel or tub, with their small ends down. Melt and strain a quantity of cheap tallow or lard, and pour, while warm, not hot, over the eggs in the jar till they are completely covered. When all is cold and firm set this vessel in a cool, dry place till required for use. After the eggs are taken out, the grease need not be wasted, as it will serve for making soap, or many other household uses.

No. 3.—Pack the eggs in common salt, with small ends down, and they will keep tolerably good for eight or nine months.

It has been stated by Reaumer, who is high authority, that clear and unfertile eggs will keep good longer than those that would be productive; but it is doubtful whether the difference is so great as to make it justifiable keeping the hens in a melancholy widowhood on this account.—*American Poultry Yard.*

FLAX CULTURE.—James Sloan, of Winnebago, raised a fraction under two acres of flax the present year, with encouraging results. It was sown on old land about the middle of May, and started nicely, but the dry summer made it rather a short crop, yet the yield of seed was twelve bushels to the acre, and a ton of straw. He has sold for 87 cents per bushel, which gives \$10 24 per acre. The cultivation and cutting with a reaper and threshing by machine is about the same as wheat.

Compare this statement of flax with wheat this year, and the preference is given to flax. Call the average of wheat fifteen bushels, which is too high, and wheat at 70 cents per bushel is \$10 50 against \$14 34 for flax.

The indications are that it is safe for farmers to experiment, at least, more largely with flax.

Pain and Death.

It is a comfort to know that insects have no nerves of sensation. The idea that every insect and reptile, and even myriads of animals that we are obliged to crush and destroy day by day suffer pain, is a terrible one. The poets have taught us the idea; it is left to naturalists to set us right.

Insects may be cut and pulled to pieces without giving any indication of pain. When they lose a leg or two, they go about their business without seeming to mind it at all. Cut a wasp in two, so that his throat is separated from his stomach and abdomen, and he walks about merrily, and eats with an unusually good appetite. In fact, as his food passes through him at once, it gives him no inconvenience, and he can eat any quantity. The enjoyment does not last very long, because the process of nutrition cannot go on without the organs of digestion; but Mr. Wasp does not appear to suffer in the least.

Insects, in certain cases, show muscular contractions, but these are not proof of pain. We know that there may be the most spasmodic action in the human body without the least suffering. Some years ago we knew of a little boy whose lower extremities were thrown into spasms by an injury to the spine. The little fellow had no feeling below the point of injury, and was greatly amused to lie and see himself kick. So, the convulsive spasms of men who are hanged are no proof. When the neck is broken there can be none below the point of dislocation. When the neck is not broken, the pressure of blood on the brain produces insensibility almost instantly. All men who have recovered from hanging, after it was supposed they were dead, give the same testimony as to its painlessness. When men die slowly, and with strong muscular convulsive contractions there is probably no suffering.

ADDITIONS TO ARCTIC SCIENCE.—According to the New York *Lost* Dr. Hayes' recent scientific exploring expedition to the arctic ocean was highly successful. Its results are, briefly, the completion of the survey of Smith's Strait; the discovery of a new channel to the westward of Smith's Strait; the confirmation of Dr. Kane's theory respecting an open polar sea; the determination of the magnetic dip, and of the declination at many points within the arctic circle; surveys of glaciers by which their rate of movement is determined; pendulum experiments and hydrographic surveys; a continuous set of meteorological observations; a large collection of specimens of natural history; a valuable collection of geological specimens; the accomplishment of a higher north latitude than ever before attained upon land; and, lastly, a large collection of photographic views of the country, icebergs, and of the natives and their settlements. There are thus two hundred photographs of arctic scenery, the same number of sketches, and the statistics of about seventeen hundred miles of coast scenery—results which show that the Doctor's time must have been wholly occupied and his duties arduous.

THE ILLINOIS FARMER.

BAILHACHE & BAKER.....PUBLISHERS.

M. L. DUNLAP, EDITOR.

SPRINGFIELD, DECEMBER, 1861.

Editor's Table.

We now set down to finish up the last number of the ILLINOIS FARMER for the year 1861, completing our monthly visits to our readers. A year that will form a new era in the history of our country, and one over which the fell demon of war has stalked with destructive steps. At the beginning of the year we were proud to number among the subscribers and readers of the FARMER, President Lincoln, Captain (now General) McClellan, Governor Yates, Governor Wood and others, now so fully occupied with their official duties that successive numbers of the FARMER must lie on their tables uncut. These were no dead-head subscribers, but men who take a deep interest in the agricultural prosperity of our State, and who advise and encourage us to press forward in the good work. When peace shall again bless the land and they find a relief from the pressing cares of the nation, they will turn with pleasure to give a word of advice and encouragement to the hardy tillers of the soil—the men who came up to their call to do battle for the right and to save intact the government under which they have carved out happy homes and erected altars from which go up the blessings of the sons of freedom.

Bleak December is busy whirling the fallen leaves into the wintery eddies, and the horrors of

war is laying low the flower of our rural population, the winds moan through the branches of the dismantled forest, and sweeps with sullenness over the deserted lawn covering the new made graves of those who have laid down their lives for their country, with the leafy garniture that autumn swept from the sylvan groves that now bare themselves for the coming wintery storms. The genial days of spring will return and the leafy crown shall be added to tree and shrub, to be kissed by the summer zephyrs, but the kiss of the mother, the wife, or sister, shall not again, this side of the great future, press the lips of those who can only live in the hearts of the loyal. We write in sadness, for among those who return no more are many that we count among our friends, and one has gone out from our household in all the pride and vigor of youth to wield his trusty blade in the cause of his country. We fear not so much the enemy in battle as we do the fell destroyer who follows in the camp and counts his victims by the hundreds. We can only pray that reason may come to the maddened leaders of the South, who are calling down quick destruction on the firesides of a people who would otherwise be loyal.

AN ADDRESS.—We have received a pamphlet copy of an address of Luther H. Tucker, editor of the *County Gentleman*, delivered at the Oswego County Fair, New York. It is a most excellent practical address and well adapted to any latitude. In speaking of the competition with the West, he says:

“A somewhat similar compulsion, arising from the virgin wealth of the vast prairies in our newer States, when competing with our older and less cheaply cultivated soils at the East—a compulsion which bids fair, in any event, to become constantly more and more urgent—has been for some time tending. I think, to give a similar impetus to improvement here: and now that we have been placed amidst new circumstances to derange our markets, and to reduce, for the time being at least, the money value of our crops, it becomes a matter of great practical interest for us, to consider whether there is not a lesson of farther good to be derived from the present condition of affairs.”

Upon the subject of profits in farming he resumes in this wise:

“These questions are urged upon our attention, moreover, because there are certain statements in current circulation, which are, as I lieve, partially unfounded, or very greatly exaggerated, and calculated to do injury rather than good. One class of the statements alluded to,

threshing and the substitution of cultivators instead of the hand hoe, and by the vast saving in the time required to market the products of the farm when it is done by railroad or steamboat, instead of teaming them a score or two miles over heavy wagon roads, and spending perhaps a week to do what a letter will to-day accomplish by 'return of mail.' In the second place, there are many drawn away from the rural districts, who when there never belonged strictly to the farming population of the country; the railroads and other influences are constantly centralizing many kinds of industry in the cities which were formerly carried on to better advantages, or indeed at every cross road. The implements of the farm, from the plow all the way through the list, formerly were made singly by scattered smiths and mechanics, instead of by the wholesale in huge factories; the clothing of the farmer, from his hat to his boots, was more generally cut and put together, if not its very materials manufactured, almost at his door, instead of coming ready-made from distant cities and towns; in fine, access to the great marts has been rendered so easy that much of the trading even has left the villages for more central and important points. In all these ways, the cities have gained at the expense of the country—not at the expense of the farm; while the farmers have gained all the time in the more general adaption of improved machinery; in increased consumption of their products, and in the power of obtaining better manufactures at lower prices."

WHEAT AND CORN IN OHIO.—Mr. Secretary Klippart of the Ohio State Board of Agriculture, has furnished a number of interesting documents to the editors of the *Country Gentleman*. In a private letter accompanying them he gives a return in round numbers of the two great crops of that State for 1860, based upon the State statistics now partially tabulated, together with an estimate of the production of the present season, 1861—both of which we give below, in connection with the actual yield reported in 1858 and 1860:

Returns of 1858.	Returns of 1859.
Wheat....17,655,483 bush.	13,349,967 bush.
Corn.....50,863,582 "	68,730,846 "
Estimate for 1860.	Estimate for 1861.
Wheat....30,000,000	30,000,000
Corn.....90,000,000	75,000,000

The wheat crop of 1859 was sadly injured by the disastrous frost of June 4, the average yield being but seven and one-third bushels per acre that year; the largest crop ever reported was that of 1850, of 31,500,000 bushels, or eighteen bushels per acre. The average wheat crop of the State for the ten years preceding 1860, was twenty millions of bushels per year—exactly 20,016,460—so that the estimate above given for 1860 and 1861, is fifty per cent. more than "an average," provided a period of ten years is long enough to fix the meaning of this uncertain term.

emanates quite frequently from among farmers themselves. 'Farming,' they will tell you, 'does not pay. It is a life of slavish toil—of unceasing and ill rewarded exertion—of hazards in profit and exposure of person—of few pleasures and many pains.' Accordingly we find the children of those who express such opinions, as soon as the welcome age of manhood comes, branching off into any other pursuit rather than follow that which their fathers have always taken pains to render both discouraging and repulsive to them. Another class of the statements mentioned, we constantly hear from would-be scientific gentlemen—who may perhaps have patent manures to sell, or letters of advice to give at a reasonable fee—or soil analyses to make—very cheap, and very valueless. They tell us that we are rapidly exhausting our soils. That our wheat crops formerly averaged twenty-five bushels per acre where they now average from eight to twelve bushels. That the ruin of our soils and ourselves is certainly impending, unless we adopt their specifics, and come and sit at their feet for instruction. I would not even appear to decry the services or the dignity of science—much less to depreciate the importance of knowledge, or discourage the more thorough education of our young farmers; but let us be very wary of pretenders, remembering always that quackery is no stain upon the shield of true science, and that even she herself cannot point out to us any 'royal road' to thorough farming, which is not in accordance with the truths of our every day experience, or which shall relieve us from the necessity of constant observation and the skillful management of our affairs."

And on the deterioration of our soils, he has another drive at the patent manure men.

"In speaking of the improvement or retrogression of our farming, of the deterioration or non-deterioration of our soils—it is to be deeply regretted that there should be so much ground as there undoubtedly is, for the assertions alluded to. There can be no dispute that many farms have been worn down almost to the last degree of apparent exhaustion, by mismanagement and rapacity. At the same time, the ranks of good farmers are filling by degrees; and, to take the whole of this State together, I am very much inclined to discredit any statement which should make out either its average or its aggregate produce per acre, at any former period in its history, more than it is to day. I can find no statistics which justify such an assertion."

A great truth plainly told.

"And if our rural population has increased less rapidly than that of our cities and towns, and in here and there a case actually shown a slight falling off—here again there are two important considerations which we must not overlook: In the first place, we can with difficulty estimate the number of those whose absence from farm labor is fully made up to us in various ways—by the immense numbers of reapers and mowers we now employ, by the use of machinery in

The largest corn crop ever reported was that of 1855, 87,587,434 bushels, or very nearly forty bushels per acre. The average corn crop of Ohio for ten years preceding 1860, was sixty-five millions of bushels per year—exactly 64,910,358—so that the estimate for 1860 is very nearly forty per cent. more than “an average,” while the estimate for 1861, if realized at harvest, will be considerably above it.

It is curious to notice in connection with the corn crop, that for ten years preceding 1860 there had been a regular alternation of a low crop in the even year, with a good one the odd year. The average crop, for example, for each of the five even years, 1850, '52, '54, '56 and '58, was 55,124,554 bushels, while the average for each of the five odd years, 1851, '53, '55, '57 and '59, was 74,696,162—a difference in favor of the latter, averaging twenty millions of bushels a year. But the season of 1860 comes in to break up this regularity of good and bad crops, by a return unprecedentedly great.—*Country Gent.*

COTTON ON THE PRAIRIE.—In the January number we shall have considerable to say in regard to cultivating this plant. We have beautiful samples of cotton grown in Champaign and Christian counties, this season, where preparations are making to plant several thousand acres next season. So far as we can learn, cotton has not failed to fully mature in the central and south part of the State at any time since the settlement of the country. Corn has yielded to the laws of trade, and its place must be filled by other products, and among these we may count our Sorghum, Cotton, Flax, and possibly Hemp, Tobacco and Castor Beans. Fruit culture still needs our most attentive care.

Make up Clubs.

This is the last number for the year. Now is a good time to renew old clubs and to make up new ones. We are giving the best publication of its class in the West for the least money. We have in view the one object of advancing and elevating the farming interest. Our paper is under the control of a practical man, whose interests are identical with those for whom he labors, and we trust the friends of the enterprise will be active in obtaining new subscribers for the new volume. See terms elsewhere.

PUBLISHERS.

PRINCE DE JOINVILLE.—This experienced soldier is in raptures over the grand review, alleging that he never saw anything compared with it in the Old World, when the regularity, promptitude and harmony of the movements are taken into consideration.—*Wash. Cor. Phil. Press.*

Pay Up.

Our readers know that we do not often trouble them with a “dun.” Many of them are prompt paying customers, whom we have no occasion to address on the subject of this notice. Others are neglectful and have allowed themselves to fall behind, some one year, some two, and some three years! Every man can see exactly how his account stands with us by examining the figures placed at the end of his name on the address-label. We trust all who find themselves in arrears will take immediate measures to square their accounts. Money sent by mail is at our risk if deposited in the presence of the postmaster at the office where it is mailed.


Address: BAILHACKE & BAKER, publishers,
Springfield, Ills.

BLACKBERRY WINE.—Take one bushel ripe blackberries, fifteen pounds best white sugar, two gallons water. This will make about five gallons of wine.

The manner of making is as follows:

Take the bushel of blackberries, bruise well in a tub, and pour over them two gallons of boiling water; let it stand until cool, and then strain or press. To each gallon of juice thus obtained, add three pounds best white sugar. When the sugar is dissolved, put the liquid in a cask or some other vessel that will just hold it, and let it stand in a moderately cool place, without corking, to ferment. The fermentation will throw off the foreign matter from the liquid, by keeping the cask or vessel full, adding berry juice or water as the quantity is diminished by fermentation. When the fermentation has nearly ceased—which may be known by it ceasing to make any noise or but little effervescing—then cork tightly, and let it stand without being disturbed in any way until November or December. Then rack off the liquid carefully and throw away the dregs or lees, wash the cask clean, and return the liquid, and add two ounces of mashed raisins to each gallon; cork tightly, and let it stand a month or more, when you will have a wine of good drinking quality.—*Selected.*

A MONARCHY FOR THE REBELS.—Recent intercepted letters indicate that there is much apprehension of the establishment of a monarchy in the rebel States. The passage in Gov. Pickens' message, calling for a “stronger Government,” the action of the Richmond convention in restricting the right of suffrage, and similar movements in Alabama and Louisiana, seem to thoughtful Southerners to be regal precursors of the future.

 Counterfeit \$5 bills on the Bank of Orangetown, N. Y., are in circulation in northern Illinois. Let our citizens look out for them.

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 125,000 three " " "
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 2,000 Cook's Seedling Peach.
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 8,000 " " " Standard Pears.
 40,000 one year old Orange Quince.
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 12,000 three " " "
 10,000 Silver Poplars—new kind.
 20,000 Lombardy Poplars.
 15,000 Weeping Willows.
 12,000 Silver Maple.
 60,000 Raspberries—14 varieties.
 75,000 Currants
 20,000 one and two year old Asparagus.
 180,000 Ohio Prolific and Houghton Seedling Gooseberries.
 125,000 one and two year old Catawba Grape Root's.
 80,000 " " " Isabella " "
 400,000 Grape Cuttings.
 100,000 Apples grafted in fall.
 100,000 Quince Stocks.
 50,000 Quince Cuttings.
 50,000 American cultivated Cranberries.
 150,000 one and two year old Apple Stocks.
 50,000 imported Pear Stocks, deliverable in spring.
 25,000 Plum Stocks.
 30,000 Mazzard Cherry Stocks.
 20,000 Mahaleb " "
 50,000 Osa e Orange,
 25,000 Lawton Blackberry.

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No. 1—Cut 8 inches, wrought iron standard, for one horse power.

No. 5—Cut 10 inches, wrought and cast standard, right and left hand.

Clay soil plows—Cut 10, 11 and 12 inches, right and left hand, double and single shin, wrought standard.

No. 3—Cut 12 inches, wrought and cast standard, right and left hand, single and double shin.

No. 4—Cut 14 inches, wrought and cast standard, right and left hand, single and double shin.

No. 5—Cut 16 inches, wrought and cast standard, right and left hand, single and double shin.

No. 3—Clipper plow; cut 12 inches, wrought and cast standard, right and left hand, single and double shin.

No. 4—Clipper plow; cut 14 inches, wrought and cast standard, right and left hand, single and double shin.

No. 3—Cast steel, cast standard, right and left hand, double and single shin: **BOTTOM LAND PLOW**, cut 12 inches.

No. 4—Cut 14 inches, **STUBBLE PLOW**, wrought and cast standard, right and left hand, double and single shin.

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No. 3—Cut 12 inches, right and left hand, single and double shin, wrought and cast standard.

No. 4—Cut 14 inches, right and left hand, single and double shin, wrought and cast standard.

No. 5—Cut 16 inches, right and left hand, single and double shin, wrought and cast standard.

No. 3—Clipper plow, right and left hand, single and double shin, wrought and cast standard.

No. 4—Clipper plow, right and left hand, single and double shin, wrought and cast standard.

No. 1—Single and double shovel plow, with or without shield attachment.

Breaking plows—Cut 12, 14, 16, 18, 20, 22 and 24 inches mould board and red, right and left hand, cast and wrought standard with iron, steel, gauge wheels, rolling or standing cutters, with or without extra shares, as desired.

Cultivators, with three and five teeth.

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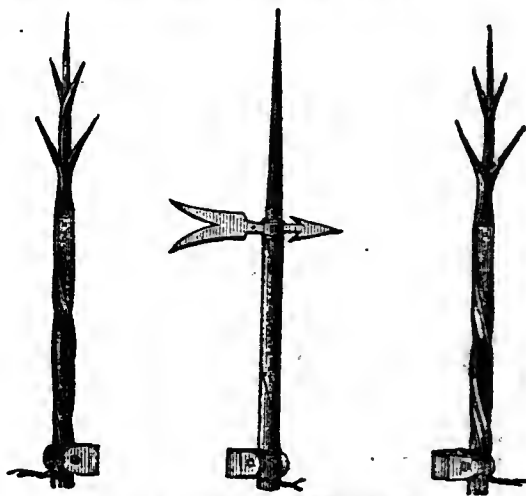
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